

# SIREN

*The Newsletter of RSG*  
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The entrance door into the Soviet Nuclear Warhead Bunker at Stoizenhain



Subterranea Britannica  
[www.subbrit.org.uk](http://www.subbrit.org.uk)

Subterranea Britannica's Research Study Group (RSG) aims to study and record the UK's Cold War defence infrastructure: e.g. radar stations, secret bunkers, communications networks, civil defence plans and propaganda.

Subterranea Britannica is a society devoted to the study of man-made and man-used, underground structures and the archaeology of the Cold War. The main focus of interest is on abandoned and forgotten structures and, in the case of Cold War structures, studies are entirely confined to declassified and decommissioned structures.

The society is open to all and its membership includes all walks of life. Members are invited to contribute to this newsletter even if this just means sending very welcome snippets from newspapers and magazines.

**Editors. Nick Catford and Dan McKenzie**

**Please send contributions to;**

**Malcolm Tadd, 65 Trindles Road, South Nutfield, Redhill, Surrey, RH1 4JL**

**E-mail: mtadd@nascr.net**

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**Photo's in this Issue courtesy of Nick Catford, Dan McKenzie & Mike Barton**

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### **East German tour 2000 by Mike Barton**

WGF – Western Group of Forces, the later term for GSFGA's Wun-hung Lo, a 9<sup>th</sup> century Chinese philosopher succinctly put it: he who has a big mouth will surely put his foot in it. It all started at the visit to Hack Green. The day was almost over, and Any Other Matters was on the agenda. For some obscure reason, I stood up and announced that I could organise a trip to a number of former Soviet and EGER bunkers if there was sufficient interest. Apparently, there was! All I had to do then was to find the bunkers and organise the tour.

I've been living in Germany since 1978 as a civilian, but I first went to Germany, in fact to Berlin, in 1960 as a regular soldier. In the course of the next 18 years my work in sigint saw my interest in the Russians, the East Germans and the military and political situation there grow. By the time that I was on the point of retiring from my civilian post, I had "reactivated" my knowledge and had started to collate information on the former garrison locations of the Soviet and East German forces for no specific reason. I had also become a member of Subterranea Britannica and was pursuing a "remote" interest in the bunker reports and other visits to sites in the UK. When the Hack Green trip came up, I already knew of and had visited two bunker sites over here. Two: and here was I offering to bring a group of people all the way over to visit an unspecified number of bunkers. There was

work to be done! The next few months saw countless letters being written to the ministries of the interior of the six *Länder* (states) in what is now eastern Germany, to the federal ministry of defence and every Tom, Dick and Harry (or every Hinz und Kunz, as the locals here put it) that I could find. Some 150 letters were written at this stage as I gradually began to accrue contacts, possible sites, recommendations, etc. I was also able to start playing military games again with maps and pins: different colours for bunker only, bunker with accommodation nearby, Russian, EGER military, EGER Stasi and so on. But I also needed to get out onto the ground (the old military adage "Time spent on reconnaissance is never wasted" came true time and time again). I had to visit the bunkers themselves (generally two to three visits so that I could make myself known to the owners, authorities, etc., and to take photographs while the sites were empty), stay in the hotels to establish what services they offered, drive the route to see what the roads were like (a lot of eastern Germany is still very rural, and the bunkers were often way out in the sticks). There was also the additional problem that I live down in the south-east corner of Germany, and where we wanted to go was up in the top right, so I had many hours on the road just to get to the general area before I could start doing anything.

At the same time, I had also posted a general

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call for names of those interested. Naturally, everyone wanted to know how much the trip was going to cost. What trip? I was still searching for bunkers, let alone having time to sit down and cost the whole tour! Gradually, my map was filling up with lots of coloured pins, whose significance I had long since forgotten. But there was also something happening out there: I was starting to receive numerous letters from unknown people who were going out of their way to help me with offers, additional information and general encouragement, and this from Germans who are generally conservative, to put it politely. Somehow I had started to come into contact with a breed of people who could actually understand that a bunch of Brits actually wanted to pay to come to Germany to visit a load of underground facilities that the authorities were trying to close down or sell. One answer, a phone call to be precise, was from a major in the Bundeswehr who had previously served in the EGER army. He offered to organise a special tour for me of four underground bunkers in his area, provide me with a car and a military driver, accompany me to give me the background details and I could stay in Bundeswehr accommodation at no charge.

Although over ten years have passed since the two parts of Germany were reunited, there is still quite a lot of antagonism between the two

sides for various reasons that are not important here. During my preparatory work for the tour, and even since then on subsequent visits, I have only ever been very warmly received by anyone and everyone that I have had the pleasure to meet in the former German Democratic Republic. In fact, a lot of them have become very good friends of mine.

I had set the tour dates for April / May 2001 in order to gain maximum benefit from the weather, and the date was gradually drawing closer. I was now able to quote a price for the tour, which was very reasonable since the Bundeswehr was going to provide us with accommodation at several sites, mostly at no charge, and one hotel offered me exceptional rates because I had translated their flyer free of charge. Several other hotels also offered huge group discounts that were not normally available. What was the (German) world coming to?

Final emails were sent advising the participants of the route to the RV, a Bundeswehr barracks in Magdeburg, and hints on coping with the myriads of Michael Schumachers on German motorways. I set off on April 28 in convoy with Peter Seip, a former colleague of mine, who was also interested in bunkers and who was going to act as my QM (quarter-master) for the duration of the tour. I had already collected three participants from nearby Nuremberg airport the day before. These had stayed at a hotel in my town on the Friday and, with Peter, we had had a light meal and a few drops of beverage in an excellent Italian restaurant that evening.

Everything was under control, everything had been double-checked, all that had to happen was for it to work out with 20 people, most of whom I had never met before (and when you've met some of them, you really start to wonder!). It had been previously arranged that I would have to make a detour in Magdeburg to drive to the residence of the garrison duty officer, i.e. not at the barracks (which were empty with the gate wide open), collect the keys to our blocks and the individual rooms, and then drive on to the barracks and prepare



everything. The night before my departure the duty officer, a sergeant-major and an old friend of mine, had phoned me and said he would drive in specially to the barracks and open up everything for me to save me time and to wait for me there. A great start!

In the course of the afternoon, cars with UK registrations started to unload their dubious looking cargoes, rooms were allocated, orders taken for the take-away pizzas that had been organised in Magdeburg for that evening. Tired and full of expectations, we settled down somewhat late(r).

Early next morning (four visits to do that day!), we had breakfasted, and moved all the food and drink that Peter had organised for our daily needs in the coach ready to the front of the accommodation blocks, together with our luggage, cameras, sound equipment, kitchen sink, and several other items. My first doubts began to surface: I had only ordered a 25-seater in order to keep the costs down, and here we had a mountain of kit that would have taken us up Mount Everest. God bless the Ossies, as the East Germans are known: a 50-



seater Mercedes bus swung into the barracks and headed in our direction. First impressions of Jochen, the driver, were of a potentially morose, monosyllabic character. Like most first impressions – totally wrong. He wasn't just the driver, he actually owned the bus company, and as a former border guard, he was interested in the subject matter of our tour and had decided that he would drive us. And he drove us in his brand new, DM 300, 000 bus,

always with a smile on his face, a jolly comment for every occasion, even when he was driving us cross-country over fields or reversing some half a mile up a narrow lane with branches scrapping the bodywork of his new coach.

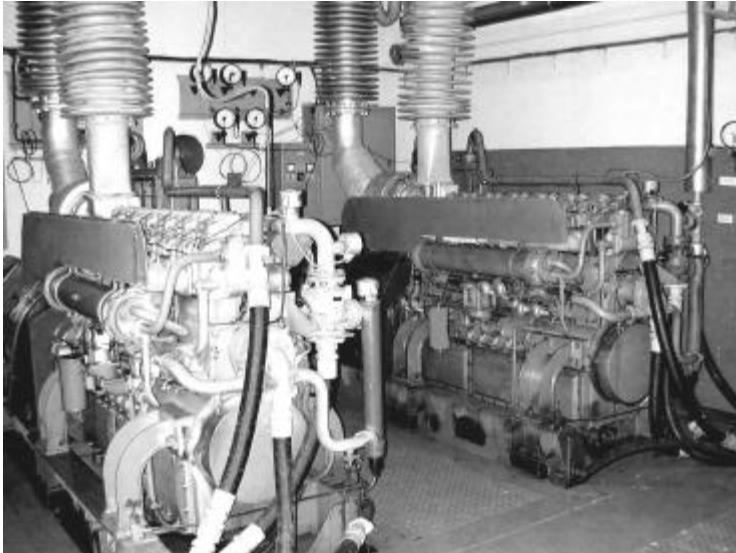
Our first port of call was just the other side of Magdeburg to a former Stasi bunker, deep in a forest. But this was Sunday, and our appointment was for 9 o'clock. Would the owner be up and about since he also had to drive some distance to be there. All OK! And our first radio reporter was also there (I had arranged for three TV teams, two press reps and a radio reporter to meet us at various points on the route). The first bunker was a very good choice since we would be seeing three Stasi bunkers during the tour, starting with the one that had the least to offer, i.e. no lights, rubble over the floor, and bits of equipment still lying around in some of the rooms. The owner started his spiel, I interpreted what he said into English, and then we were making our way down the steps into the unknown. It is always a fascinating experience, I find, when I start descending into

a bunker that was once used by the Cold War "enemy" – this is where the East Germans or the Russians would have been preparing to do their worst (as we did the same!). This first visit on the tour also set the tone for the rest of the trip since the owner had crates of EGER equipment, gas masks, filters, etc. As we made our way back to the coach, most of us were clutching our first souvenirs, and Jochen opened up the side panels of his coach, and not for the last time, to enable us to pack our goodies away.

Another short trip and we were in Altengrabow, a huge TA now used by the Bundeswehr, but

formerly very much under the control of the Soviet 3<sup>rd</sup> Shock Army, in particular 10 Guards Tank Division. Here we visited a very important communications bunker that was co-located there, as it was actually under the direct command of HQ Soviet Forces in Germany, the Western Group of Forces, at Zossen-Wünsdorf. We had a free hand here and we able to investigate and photograph to our heart's content. Russian script on the huge

blast doors and inside in the various offices and service rooms helped to create the right atmosphere. Racks of equipment, remnants of compressed air tanks, ripped up floors where the cable runs had been: scenes that were to



be repeated at numerous other sites.

We stayed in Altengrabow for the next two visits: firstly, to a huge munitions depot of the Soviets, and then on to a private museum that showed how the TA had been in use in the Kaiser's time, its extension in WW2, and then life in Soviet hands (the husband of the lady who showed us around had actually worked in the Soviet garrison and had collected some very attractive items when the Russians finally left). Back into the coach and on to the outskirts of Potsdam for our second night in Bundeswehr accommodation. Actually, it was formerly NVA accommodation, but excellent value for £3 a night. Certain members of the tour discovered that signs on doors saying "Showers, Ladies Only" meant just that!

Monday found us in Wildpark, the HQ of the Bundeswehr's IV Corps. However, our interest concerned the earlier days of the barracks since it was here that the bunker *Kurfürst* was located. In WW2 it had served as a command post for the Luftwaffe and was also linked to the Berlin cable ring, a 400 km circuit that had been laid between 1934 – 1936 at a cost of RM 9 million and which still has an important telecoms role. During the Cold War, the bunker served the purposes of the NVA's ground forces. In the event of war breaking out, the bunker would also have served as the control centre for the capture of West Berlin, where the

three western allies had their troops, including me. We were given an introductory lecture on the history of the site and the role of the communications facility that is co-located with, but not in, the bunker. We were at this point joined by the garrison commander, who came to welcome us (in English) officially to IV Corps. Ample time was provided for us to wander through *Kurfürst*, which was built into the side of a hill. As a special treat, we were then allowed into the comms facility, from where the Bundeswehr can maintain comms with its units on a world-wide basis, viz. Bosnia, Macedonia, the USA. The visit was followed by breakfast with the garrison commander and the comms staff who had shown us around. Unfortunately, this very successful visit was subsequently somewhat spoilt by a

would-be journalist in the group who wrote a very tendentious article for a newspaper. In view of the extreme distortion in the article of what we had seen and been told, I felt obliged to write to the press office of the German embassy in London and to all the individuals at Wildpark to apologise on behalf of the group.

The day continued with a journey around the south of Berlin to reach our next four sites to the east of the capital. These were located at Garzau (NVA computer centre), Harnekop (NVA MOD bunker), Strausberg (NVA MOD) and Falkenhagen (special communications bunker of the Soviets, actually subordinate to the Warsaw Pact and not the WGF). The latter was also of interest in that it had been the site of sarin production in WW2. In Strausberg we were given a guided tour of the comms bunker by Colonel Kampe, who had run it for some 10 years, and were then passed on to Colonel Brand for a tour of the operations bunker (linked to the comms bunker by a tunnel): Col. Brand had also served there as an ops officer, so we were well served. The bunkers were in the process of being stripped back to the bare concrete (like many others in the ex-GDR) and will then be sealed up. However, we were still in time to liberate a few items of equipment that were not bonded to the floor. The comms and ops bunkers had been in daily use for the MOD, and, in the event of a threat developing, the staff would have gone to Harnekop.

The Garzau, and Strausberg bunkers (not the ops bunker) were extremely large (some 60 x 80 m), on two levels, rectangular, with an inner ring corridor. Apart from the numerous blast doors and dog-leg entrance corridors, there is always an equipment shaft on one side of the bunkers, via which the power plant and other heavy gear was brought in. These shafts also have their own blast doors at the bunker level. The bunker at Harnekop was on three levels and is run as a museum with regular opening hours. It is full of equipment, most of it original. The Falkenhagen site is a rambling bunker that has been extended, modified, cut back ever since it was first built for the Nazis. There is no lighting available, which makes wandering around below ground even more impressive. This was an extremely important site for the Sovs.

Our next bunker would also have been of Soviet usage, but unfortunately no one turned up to let us in! This did not stop the group doing its own tour of an adjacent site and carrying out its own investigations ('nuff said). The location, Zossen-Wünsdorf, was the HQ GSFG and therefore had a very important bunker. This is now run as a museum with daily tours.

The Soviets remained the topic of the day as we moved on to a former nuclear warheads site. The whole aspect of nuclear weapons, the warheads, missiles, etc. was firmly under the control of the Soviets within the Warsaw Pact (the equivalent of Nato): The USSR was the only nuclear power in Eastern Europe. The warheads for the GSFG and the NVA were kept at Soviet sites, which in turn were normally guarded by the KGB. There were not many sites, and the Soviets took absolutely all relevant documentation with them when they were withdrawn. It has nevertheless been possible to identify practically all of the sites, and we went to the only one that is still accessible. This particular site was the southern location of the Soviet nuclear warheads store for the NVA missiles. It is not actually open to the public since the huge blast doors (large enough for Soviet army vehicles to drive in) are welded shut. One set was opened up especially for us and re-welded after we left. The site,

which shall be nameless as the owner does not appreciate visits, is in the middle of a barracks in the middle of a forest in the middle of nowhere – it must have been an exhilarating posting. The whole complex has three rings of fencing around it, the outer two with 1500 V flowing through them. The storage area itself was a secure zone within the barracks and the sliding entrance gate was normally kept closed. Entrance would have been via the cellar of the HQ building outside of the area, which was linked to the zone via a tunnel. The inner zone also had numerous infantry bunkers for the defending forces.

The warheads bunker itself was in excellent condition and we were able to wander around freely. The warheads would have been brought in by truck, lowered via an overhead crane into the reception well and then moved off to the side storage rooms. Each warhead was stored in a special container, which, in turn, was secured by four tensioning arms which clamped it firmly to the floor of the storage room.

We continued our journey southward towards Leipzig and arrived, some what late, at Söllichau, where we were met by a TV crew, which had been patiently waiting for us. We actually stayed overnight in the NVA barracks here and were catered for by the last commandant of the site, Col. Krumnow, who now acts as custodian for the complex. And a complex it is: six extensive bunkers – four for staff officers, a comms bunker, and a services bunker. The comms bunker, for example, is so large that the centre spine has three extensions at each end, at right-angles to each other, which permit signals trucks with satellite



dishes on their roofs to drive in to link up to the mains comms facilities – three trucks to each extension! Outside the aerial fields are all underground – Soviet and EGER bunker sites never transmitted from the sites themselves: they had remote transmitter sites located 30 – 40 kms away, some of them extremely complex, but that's another story. On site, the receiving aerials were all underground and normally of football-pitch size. The whole site is in very good order and Mr. Krumnow spent a lot of time showing us around one of the staff bunkers, the comms and service bunkers.

Early the next morning we were gently shaken out of our bunk beds by the original NVA site alarm going off, with Col. Krumnow's finger on the button. With breakfast in our stomachs and the alarm still ringing in our ears we moved on to Machern, the site of the second of our three Stasi bunkers. Machern lies just to the NE of Leipzig, and this bunker would have served the Leipzig Stasi, or some of them at least. It is now very well run as a museum by André Rotter, a former civil-rights protester in the last days of the GDR regime, who showed us around the single-storey bunker. This, like practically all Stasi bunkers, has two parallel main spines with the staff offices off to one side, the services, comms, etc. on the other side. Additional services (water and generating plant, emergency exits) surround the core area. Like all bunker sites in EGER, Soviet or their own, Machern is extremely well hidden: all sites had a cover story, but in any case were normally very difficult to find. The museum is full of original equipment and looks as it did when it was in use: only the cipher equipment is missing, since this was removed by the Russians.

For something completely different, we moved on to Colditz Castle (well some of the PoWs did try to tunnel out, so there is a connection). Here we were given a guided tour in English and were able to gain an excellent impression of what life must have been like there from the numerous photos and other exhibits. I was able to keep a promise here when I gave the guide a jar of Marmite, something that I had promised him during my previous visit. Incidentally, we said "thank you" to all of our guides, custodians, friends, by giving them packets of English biscuits, which members of the tour had brought across with them by prior arrangement. I still have contact with many of the people that we met on the tour, and they nearly always comment about the biscuits.

In Leipzig we had an excellent view of the city from the top of the tower at the town hall before descending to the cellars where we wandered through some of the oldest parts of the city. Immediately afterwards we found ourselves in the Moritzbastei (Moritz Bastion), a similar construction, but more extensive and with an underground student restaurant attached with excellent prices and a full menu on offer. We also stayed overnight in Leipzig in a motel that offered us excellent rates. An early start next morning, though, as we had a long drive to Blankenburg, which is almost located on the then inner-German border. Here we were once more guests of the Bundeswehr, this time at a huge medical depot. The particular interest here was its history since it was formerly used by the NVA as a regional depot with sufficient stocks to fit out a division on mobilisation. The depot was in a huge set of interlocking tunnels that had been dug out of the mountain. The complex was / is so large that complete trains could be driven into the depot. The advantage here was that the facility was still in use so it has been well looked after. In addition, it still has the original control centre and bunker HQ deep inside.

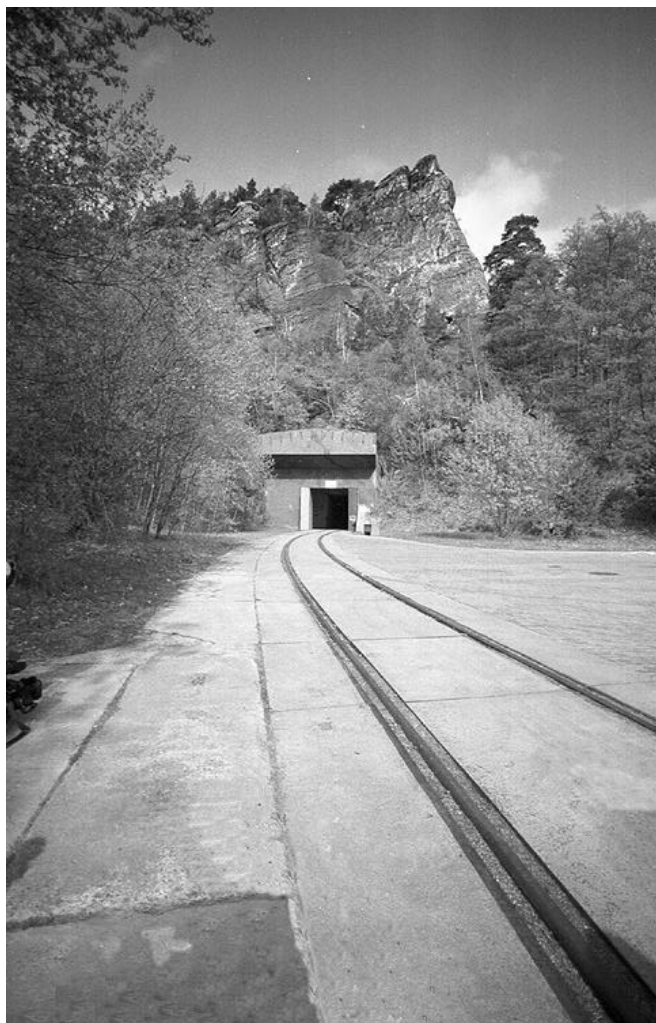
Not far away lies the town of Nordhausen, and here we moved back in time to WW2: the tunnels here had a completely different function to those at Blankenburg. They were used by concentration camp inmates to assemble V 2 rockets. Remnants of the camp are still to be seen at the site. The tunnels themselves have been collapsed or filled in, and nowadays there are only some 300 m left that can be viewed. These are also partly flooded, and remains of V 2 rockets are still visible in the rusty water.

Our next site at Suhl was both bunker and accommodation. This was the third of the Stasi bunkers and, like Machern, also a museum. All Stasi bunkers were of the same design, albeit in some cases only one half was built, since the two halves were mirror images and were complete in themselves. The cover story for this site was that the facility was a holiday centre for the NVA. These facilities have now been converted into several very nice chalets, which we used, and supported by a small hotel, where we also continued our aim of trying to drink them dry.

I knew by the end of the planning stage that I would be able to offer some good bunkers, but nevertheless I still wanted to end the tour on a high note, and for this purpose we moved on to

Merkers, a working potassium mine. The underground workings are extensive and, in fact, it is only because of mine safety regulations that this mine was not extended across the inner-German border to link up with other mines on the west side. Part of the dsused area is now open to the public. We had to go through normal mining procedures and be kitted up for the journey before descending by lift to 500 m (1500 ft) below the surface. In the course of the tour we went down a further 300 m, this time in the back of an open truck that travelled at speeds in excess of 40 kph through the tunnels. Nor were the tunnels straight or level! One stretch is of the helter-skelter design with bends for added attraction. The workings were used in WW2 by the Nazis to hide the state's gold reserves as the Russians approached Berlin. The Germans failed to appreciate though that the Americans were approaching from the other direction: the gold is now located in the States. We were able to quench our thirsts at -800 m in a cavernous bar (it was extremely warm, after all, down at that depth). Fortunately, we still had space left for a final meal. We returned to Blankenburg and stayed overnight with the Bundeswehr and drove out by coach to a nearby town for a final get-together, naturally in the cellars! Three Bundeswehr officers were our guests that evening, and we were able to express our thanks to them for all the help that we had received from the Bundeswehr during the trip. Our thanks were also due to Jochen, our driver, who later brought us safely back to the barracks. The group very kindly gave me an NVA gas mask from the stocks taken at our first visit outside of Magdeburg: everybody on the tour had signed it and it now proudly resides in my office at home.

An early start the next morning, with Jochen bringing us back to the barracks in Magdeburg. We unloaded the bus of all of the junk, sorry - former NVA and Soviet equipment, that we had liberated during our invasion of Europe, transferred it to the individual cars, I made a last check to see that nobody was trying to stay behind, and then they were off on their journey back to the UK. It had been a great tour, lots of work beforehand, interpreting the whole time



during the tour, keeping tabs on where we were going, while watching the clock, but we had seen sites and sights that are accessible to only the few, and many of the bunkers will shortly be closed down for ever.

Another tour? Who knows!

**Mike Barton** (mailmikebarton@aol.com)

**Abbreviations used in this article have the following meanings:**

**EGER** – East Germany, i.e. referring to the German Democratic Republic (which it was not)

**GDR** - German Democratic Republic

**GSFG** – Group of Soviet Forces in Germany, i. e. equivalent of BAOR, but somewhat larger!

**MOD** – Ministry of Defence

**NVA** – Nationale Volksarmee: The EGER armed forces, not the EGER army

**RV** – rendezvous, i.e. meeting point



## Letter to the Editor

### Rook Wood at Margaretting

I enclose a reply to the query on possible underground ammunition storage at Rook Wood at Margaretting in Essex.

I walked the area on Sunday 24th June, a gorgeous sunny day, and spoke to a couple of elderly local worthies who were only too happy to give me some information about the site. The railway halt was at the site of the present automatic level-crossing where the London and Ipswich line crosses the end of Church Lane just before the church which stands before the railway in splendid isolation surrounded by trees and rolling cornfields

The halt appropriately named Church Lane Halt, of which there is now no trace, was put in for the army personnel apparently who lived in Nissen huts in the present cornfield between the halt and an occupation bridge about a quarter of a mile back towards Ingatestone station. This bridge and a further one by Rowes Farm at Ingatestone village both carry concrete 'governmental-type' roads about 30 feet wide, complete with cast concrete kerbs and drains in excellent condition and weed free. All they lack is a pavement and streetlights.

There is even a roundabout or circular diversion in the road to pass either side of a very handsome tree which was probably there before the First World War. These two roads run from what was the old A12 which runs through Ingatestone as the High Street. The one from the farm was blocked off by the farm house by a wide metal gate and old scrap farm machinery. The other at Rowes cottages is a public right of way and meets the farm road at a crossroads amongst trees in the midst of the cornfields.

A 1974 OS map showed a building at the NE corner but there is no evidence of this now. Two lengths of narrow gauge railway track, part of the internal security for the site, of 500mm between the rails was

found still embedded in the road surface but cut off either side complete with flanking guard rails one pair at right angles to the road and the further pair crossing at 45 degrees pointing to Rowes Farm bridge one way and Rook Wood in the other.

To continue ahead on the Rowes Cottages road from the crossroads brings one out on Stock Lane and to turn left on the continuation of the Rowes Farm road for a couple of hundred yards to a barbed wire wrapped metal gate marked 'Private' and chained shut. This road continues beyond to peter out on the Peacocks estate. However about 200 yards beyond this locked gate is Rook Wood.

A cornfield on the right allowed me to walk allowed me to walk down the rows and jump over the little brook on my left into the wood. Sad to tell after a full hour of striking about in this fairly compact wood I found no evidence of there ever having been a metalled access road and hard standings or any raised loading bays or gantries and certainly no evidence of underground storage nor even air raid shelters for personnel.

There is a wide mud/grass track about 50 to 70 yards into the wood from the concrete road with enough clearance for trucks to have driven in when the ground was hard. The local gents told me that ammunition was stored in the fields under camouflaged netting but weren't sure if the wood was used to utilise the tree-cover.

I walked on via the White Hart at Margaretting Tye a lovely pub with a superb menu and used the footpath tunnel mentioned in the query. The exit stairs really are a work of art being a left hand spiral ascending to regain the footpath passing above the mouth of the tunnels.

A curious incident and one oddity. When approaching the aforementioned barbed wire covered gate I noticed a small movement in the opposite gutter and stopped quite still to see what it was. A vole emerged and ran across the road

## Letter's to the Editor

towards me and grabbed hold of the lace on my trainer and started to grapple with and then ran off and then returned for a second go and then having failed to drag me off bodily to his lair he ran off into the grass.

The oddity concerns the first bit of road to the right of the crossroads towards Rowes Farm. The first few yards are the same 30 foot width as all other roads but then there is a length of 40 or 50 feet which is just two concrete strips about 18 inches wide with grass either side and in between before the full width road abruptly continues again. Why? What is this short dual-strip of road for?

*Roger Cleaver*

### Letter to the Editor

#### 12 Hamilton Road Ealing

The Mystery deepens. Further to Neil C.s article on the basement room at 12 Hamilton Road, Ealing in Issue of Siren 8: I was in the vicinity in March this year and called at the house to enquire on the off-chance about the basement.

The door was eventually answered after a long delay by an elderly sour-faced man with a walking stick who immediately after I said, 'Good afternoon I'm sorry to disturb you', told me he had no wish to speak to me even though he had no idea who I was or what I wanted. I assured him I was not selling encyclopedias or wished to change his political or religious points of views but he insisted he still had no wish to speak to me and stepped into the hall and shut the front door. I rather wondered why he bothered answering the door in the first place/

A quick look at the electoral roll in Ealing library told me that a Maria Maldonaldo and a Xavier San Basileo, Portugese or

Brazilian names? were the registered occupants of 12 Hamilton Road. However my elderly friend of the door neither looked or sounded Partugese/Brazilian.

I checked the phone book for either of the two named occupants and found one listing for a Maldonaldo M. at an address less than two miles away, a bit of a coincidence a thought, and wondered if it was the female occupant before or after moving in so I phoned and was answered by a male with a marked foreign accent who told me that the M. Maldonaldo listed was a Mariella not Maria and they did not know anyone of that name at Ealing or elsewhere and that the guy on the phone was not and had never heard of Senior Basileo

I decided to write and addressed to both parties supposedly occupying 12 Hamilton enquiring about the present state of affairs concerning the mysterious door and the possibility of a visit enclosing a SAE for a reply. Several weeks went by and I had almost given up on getting a reply when my original letter was returned marked 'not known at this address' and unopened - the return address being on the back of the envelope.

Who and where are the listed occupants and why was my letter not forwarded on to them if they had recently left and who was the old eccentric with his walking stick and bad attitude who answered the door to me after great delay on my first visit?

I've given up on this one and I have better things to spend my energies on but if anyone else can think of a better line of approach and are interested to follow it up I would be interested to know what success they have.

*Roger Cleaver*

## UNDERGROUND AT DOLLIS HILL

The Cabinet War Rooms at Whitehall are now well known and open to the public. The alternative Cabinet War Rooms ('Paddock') at Dollis Hill less so. They were visited by Subterranea Britannica on 17th June 2001 and are expected to be open to the public during the Spring of 2002, for which occasion the two feet or so of water in the lower level is to be pumped out for the comfort of visitors!

There are at least three entrances amongst modern housing along Brook Road, one of which remains in its original state in a small surface building with associated ventilation and power intake arrangements. The two-story underground bunker lies below the modern houses on the west side of Brook Road, within the grounds of a former Post Office telephone research station. Paddock Road was opposite, but is now obliterated by excavations for new work, perhaps a water supply installation? The local geology appears to be gravelly drift overlying, presumably, London Clay.

There are two floors underground, with notices on the walls declaring the lower one to be floor 26, and the upper one floor 27. Floor 28 appears to have been a surface building. There is no evidence for the whereabouts of any floors numbered 1 - 25! The two sets of emergency exit stairs are remarkably narrow and spiral around small square shafts.

Floor 27 has a long central corridor, with numerous rooms off each side, including some still containing air filters and non-functioning electrical control equipment. Floor 26 has a similar corridor, but with rooms off one side only. The lower floor rooms include a large central room, presumably the main cabinet room, and a plant room with some equipment still in place. There is very little evidence of any domestic arrangements ... one room might have been a small kitchen where a cup of tea might have been brewed (two sinks, but no trace of cooking apparatus.) No

traces identifiable as remains of lavatories or dormitories were seen. One room has the remains of telephone exchange racking. There appear to be no holes in the flooded lower floor, although persons wading in the rather murky water do need to take care not to fall over a few items of junk and occasional cables scattered about.



Although I was not able to estimate the thickness of the external bunker walls, it was very noticeable that internal walls are flimsy in the extreme ... often no more than panels on wooden framing. Much of the timberwork, especially on the currently flooded lower floor, is festooned with fungal mycelium, giving a horror-film appearance to doorways! Much larger and more strongly built and elaborately equipped bunkers were built in Germany during World War II, such as 'Goring's bunker' at Wildpark near Potsdam (also recently visited by Subterranea Britannica.)

At least two Cabinet meetings are known to have been held at Paddock, one of them chaired by Winston Churchill. Churchill, however, is reported not to have liked the place. In view of the apparent lack of home comforts, this is hardly surprising!

**Paul W. Sowan** 8th July 2001

## **The Royal Observer Corps Website and Data Base**

There is now a fully searchable database on the RSG web site listing all 1563 underground posts,

The web site includes:

- History: A brief history of the R. O.C
- The Survey: A searchable, up-to-date online database of underground Royal Observer Corps posts in the UK plus surface aircraft posts where they exist at the same location.
- Complete list and survey of Group Headquarters
- The Latest site updates and additions
- General ROC Site news

The database includes accurate grid references; current condition and much other useful information including full details of any artefacts found underground at posts where access was possible.

To date approximately 1200 posts have been personally visited by the author (Nick Catford) and a further 100 by other contributors. Where the post still exists in any form one or more photographs are also included. So far nearly 800 posts are illustrated.

Photographs of operational posts or posts that are not yet illustrated would be gratefully received either by e-mail (high resolution please) or by post. All photographs will be returned within a few days.

This is an ongoing project, slowed down this year by the foot and mouth outbreak but it is hoped to complete the survey during 2002.

The database is at:

**[www.subbrit.org.uk/rsg/roc/index.html](http://www.subbrit.org.uk/rsg/roc/index.html)**

## **Norwood's Nuclear Bunker By Caroline Ford**

Pear Tree House is one of South London's best-kept secrets, a block of council flats in Lambeth's enormous Central Hill Estate. It has 8 two-bedroom flats and the former control centre for South East London in the basement.

In the early 1960's the Metropolitan Borough of Lambeth was grouped with the neighbouring boroughs of Southwark and Camberwell to make up civil defence region 53a. Negotiations were taking place between them on a site for a control centre for the area and the then Conservative-leaning Lambeth were very keen. A large area near Crystal Palace was designated for a new housing estate and as it was in the extreme south of the borough and well protected by the local hills a site at the junction of Lunham Road and Hawke Road in SE19 was chosen.

Whilst the two-story bunker was being designed and approved the structures of civil defence and London government were changing. Work on Pear Tree House started in 1963 but it was now merely going to be a borough control centre, the existing borough control in St Matthews Road, Brixton was to become a sub-control. It cost £31,850 of which the Home Office paid 75% (£23,250). The 18-room bunker and flats were completed in 1966 and the bunker went into care and maintenance when civil defence was stood down two years later.

In 1971 London was designated a civil defence region again and in 1973 the GLC1 set up emergency planning teams looking at the future structures of civil defence in the capital. It was decided that London would be split into 5 groups of boroughs each having its own control centre. The GLC selected the Pear Tree House bunker as the South East group war HQ and although not ideal it was converted in 1979.

Because of its location Pear Tree House received a lot of attention in the 1980s. It was a focus of local CND marches, its blast doors were fly posted and it was open to the public for a week in 1982 for CND's Hard Luck campaign which coincided with the dates of the cancelled Hard Rock exercise. Speakers during that week included Duncan Campbell and Bruce Kent.

In the late 1980s the arrangement to rent the bunker from Lambeth expired and nuclear-free Lambeth threatened the LFCDA2 with eviction. Another site was looked for but an agreement was made and it remained the SE group emergency centre until 1993. It was later used as a social services store and is now empty.

(1) The Greater London Council was the county council for London from 1965 until 1986.

(2) London Fire and Civil Defence Authority took over responsibility for civil defence after the abolition of the GLC in 1986.

#### *References and Further Reading*

Greater London Council Emergency Planning Division, (1975), *Emergency Planning Bulletin*, no 1.

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Spark Communications, (1983), *Lambeth and the Nuclear State: A Local Perspective on the Nuclear Issue*.

Metropolitan Borough of Lambeth Civil Defence Committee Minutes 1955-64.

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#### **Pear Tree House today**

##### **By Nick Catford**

Being at the base of a block of flats there is obviously no fear of demolition and in fact the exterior of the building was renovated towards the end of 2000. The council have been unable to find a use for the former control centre, the fact that it has no windows being a distinct disadvantage and they are looking for a suitable tenant.

The main entrance is a heavy steel blast door into the sub-basement which is actually at ground level. Three rooms at this level are actually outside of the bunker, these contain electrical switchgear both for the bunker and the flats above, the standby generator and water tanks. Inside the blast door there is a small lobby area described as the 'Intake Room'.

The first room on the right is the 'Communications Centre' which consists of 4 rooms. The 'Radio Room' still containing various electrical switch gear at one end including the switch for the standby generator (not working). At the other end, the ECN unit (removed) would have stood. There is still a WB1401 speech receiver mounted on the wall. Next to the Radio Room is the 'BT Equipment Room' which is empty apart from a large floor standing fridge. The rest of the 'Communications Centre' is divided into a long narrow room containing two booths and larger room that has a small electrical rack and a bank of coloured 'alert state' lights (working). There are two message passing windows in this room and a third between the narrow room and the main control room. This room would have contained MSX and AUTEX units and FAX machines.

At the far end of the narrow communications room a door leads into the irregularly shaped (2 offset rectangles) 'Scientific Advisors Room' This still has maps around three walls including various home defence boundaries, ROC clusters

and a large chart for marking details of nuclear bursts. There is also the control unit for the bank of alert states lights which are situated around the bunker on both levels and along one wall a sloping 'desk top' shelf for writing messages.

The 'L' shaped 'Operations Room' has more large wall maps and gives access to the 'Group Controller', 'Deputy Controller' and 'Health & Welfare' Rooms. All these rooms have similar large maps on the walls, many overlaid with thin plastic sheets used for marking during exercises.



Pear Tree House

From the intake room a door leads into two rooms designated as 'Works & Rescue', the second room contains the switchgear for the ventilation plant. When switched on the plant appeared to be in good working order. The plant itself is in an adjacent room. Opposite the main blast door stairs lead up to the upper level or basement.

This consists of 8 rooms accessed from a short spine corridor with a side corridor leading to the second entrance, another steel blast door, padlocked internally. On the right hand side of this side corridor are the male and female toilets (water turned off) and on the left a small kitchen with all the usual appliances intact. There is a serving counter at one end giving access to the canteen which is completely empty. From the canteen one door leads into the spine corridor and another into the former dormitory.

It would appear that the beds had been removed and the room put to other uses.

Other rooms on this upper level were for 'Liaison Officers', 'Administration and Essential Services' and a 'Conference & Briefing Room' These rooms had the usual array of wall maps. The final room, immediately above the ventilation plant room is the filter room with the filter units still in place.

Although all equipment (except plant and some electrical fittings) and furniture has been removed there is still a lot of paperwork lying on the floor in many of the rooms relating to the

centres operation and exercises. Lights still work in most of the rooms and generally the control centre appears in good internal condition.

**Nick Catford**

## **Control Centre Policy for the Civil Defence Corps 1952 – 1968**

### **A contrast between Kent and Middlesex**

Although only separated by London, the wide contrast in policy and financial commitment between the two counties demonstrates the disorganised organisation of civil defence planning in the UK.

During World War 2, Kent was praised for its civil defence policy and organisation, in particular the County HQ under County Hall, which was seen as a role model for the rest of the country, in terms of control centres. Likewise the county of Middlesex had a substantial CD infrastructure, notably a purpose built surface county control in Hatch End. The Middlesex main administration HQ was at the Middlesex Guildhall opposite Westminster Abbey, a long way outside the county with an underground sub control at 65 Forty Avenue, Wembley.

Most boroughs had ARP controls in protected buildings; for example Harrow's control was semi sunk at the Elmgrove council depot. Ruislip and Northwood was a keen CD provider with a large protected HQ at its Northwood offices and at least 3 large decontamination centres (all of which survive in 2001)

Following reconstitution of civil defence in 1949, both Kent and Middlesex like most counties undertook a review of its control centre policy and surveyed WW2 sites and proposed new buildings in 1952/3.

The result in Middlesex was that most old ARP centres were deemed unfit for use; for example the Harrow control was flooded as was the County sub control at Wembley! The new plan to be implemented from 1954 was the building of new surface control centres at each borough. Each was to a standard pattern, approx 100ft x 30ft. There was no provision for spending a great deal of time after attack inside, the main aim was to protect against blast not fallout, providing protection against a Hiroshima sized bomb. Also in the plan was a new County Group Control, to be built alongside the

WW2 control at Uxbridge Road, Hatch End; this was to be semi sunk.

Sub controls were planned at Hendon/Finchley (alongside Borough controls) and at the WW2 control at South Road, Southall. These would administer groups of Borough controls, reporting to county group control.

In contrast, in Kent, things moved at a very slow pace, in 1953 new underground controls were opened at Gillingham and Gravesend. Kent decided to call its sub controls, district controls, borough controls and area controls. The stated aim was to set up district controls as priority, but to use existing buildings wherever possible. No money was available for area controls, and it was suggested WW2 buildings be used if available. The two purpose built controls at Gravesend and Gillingham became district controls. As an example, Gravesend's area controls were, Northfleet (Town Hall basement - the old ARP centre), Dartford, an old decontamination centre at a council depot, Swanscombe, a tiny cellar in small council office, very rudimentary and cheap.

The other district controls were, Mote Park House, Maidstone; Canterbury, the old ARP control (semi sunk) and behind the Council offices at Dane John and Ramsgate (the basement of council offices).

Although Dover was a major target no control location had been found and a school or similar premises would be commandeered in the run up to war (during WW2 the Police Station was the ARP control). Dover's district stretched from Camber Sands to Deal including Ashford. Likewise Canterbury's district from was from Herne Bay to Sheppey.

There were no area controls set up, and the situation was a shambles. The only other protected building in the county was a group control at Perry Lane, Chislehurst, built in 1953 and to same design as the new Middlesex controls. This was designated Metropolitan Kent Control. In

1955 there was a Home Office review of control centres in view of new improved weapons (The H bomb). All construction of controls was stopped pending review. This review was completed in 1961!

Back in Middlesex only a few controls had been built by 1955, when work stopped abruptly; these were Acton and West Drayton, even work on the new County Group Control at Hatch End stopped. A state of limbo existed until 1961. The old WW2 sites continued in use, at some places like Brentford and Chiswick although no protected accommodation existed. The only development was the taking over of the old war room at Mill Hill (Partingdale Lane) in 1958 as a sub county control for the Borough's of Friern Barnet, Barnet, Hendon and Potters Bar.

A new sub county control opened in the basement of the new Enfield Civic Centre in 1961, prior to this there was no control in the Enfield area. In 1958 Edmonton borough opened an underground control in the basement of the Plevna Road Health Clinic replacing the old WW2 control in Great Cambridge Road (which still stands in 2001) the latter being retained as a training centre until 1968. These two schemes were funded by the County not the Home Office.

Most other boroughs took the attitude that if no Home Office money was available there would be no control! Their reason being there was nobody to staff them anyway. This is why building of training / social centres were a priority over controls, in order to get staff! Training centres were cheaply made of prefabricated wood

In neighbouring Hertfordshire it was worse, with only 2 protected controls from WW2, but a big investment in training centres (even the SW Sub Control at Shenley was in an old WW1 aircraft workshop!) However in contrast to Kent, local Borough controls existed, for example in Hendon it was old WW2 decontamination centre in Daws Lane and in Barnet the old ARP control in the basement of the Council's Wood Street offices. The other sub county controls were Southall, (South Road) and Ealing

Technical College (no work had started here!)

In 1961 the 'review' concluded that fallout protection was more important than blast. Consequently a trawl for buildings with a good protection factor began; from Mogden sewage works to Station Z, the early 50s bunkers were deemed inadequate and inconvenient being away from council offices. For example the Gravesend sub control was replaced in 1966 by the basement of new civic centre. The only other development in Kent was providing protected accommodation for Dover District Control under the new civic centre in Folkestone and a new District Control in the basement of Tunbridge Wells Town Hall.

In Middlesex, progress was hampered by bureaucratic squabbling between councils and CD officers such as the lengthy debacle over providing a control in the Ealing Town Hall extension; this lasted 2 years!

When funding for civil defence stopped in 1968, Kent was about as unprepared as in 1952, whilst the county of Middlesex had disappeared into the new London boroughs /GLC in 1965 still in a shambolic state, in contrast to the keenness of the administration in the early 50's. It is debatable whether the controls if all built could have been fully manned, due to lack of volunteers, especially in 1960s. A lot of money was devoted to building training and social centres (with bars!) to attract new recruits, at the expense of static control centres.

**Keith Ward**



# Trip Reports

## **2 Guildford bunkers**

**by Nick Catford**

The Surrey Country Emergency Centre was located in the basement of a 5 storey extension to Guildford Technical College built in 1966. The bunker has been disused for some years and has been partly used as a training and fitness centre and partly as an archive store for the college. All the archives were removed in July 2001 and the fitness centre will be enlarged. As built, the bunker had 14 rooms but many of the partition walls have now been removed making a number of much larger rooms.

A few original features remain intact, for example in the former control room where there is a large scale map of Surrey on one wall with a plastic overlay showing the various sector posts. There is a blocked message passing window into the counter room alongside. 12 wood and metal bunks have been retained as they make useful shelves, there are four sets of three bunks on top of each other. The original entrance blast door has been removed and the entrance itself sealed off and a new wider doorway inserted into the wall of the generator room alongside. It is still possible to see the mounting for the original blast door. At the far end of the bunker a set of steps leads up to the emergency exit where the blast door (probably installed during the 1980's refurbishment) still remains in place. It is a fairly small steel and concrete door (it's necessary to stoop to get through it) which brings you out inside the five storey block at the bottom of the rear stairway.

There are a few signs remaining on walls and doors and some of the ventilation trunking is still in place but generally the bunker is completely stripped with fitness equipment in the former 'Liaison Room' and shelving in the other larger rooms. The male and female toilets are still in place though now modernised.

The former Guildford Borough Emergency Centre is in the basement of the Council Office at Millmead House alongside the Town Lock on the River Wey Navigation. The 'bunker' is no more than the basement of a Georgian Mansion, originally converted for this purpose in the 1960's and refurbished in the early 1980's in line with most other local authority bunkers.

The bunker is accessed down the original basement stairs from the ground floor corridor of the house. At the bottom of the stairs is the boiler room serving the whole building and beyond this, a heavy steel blast door installed during the 1980's refurbishment leads into the bunker. All the rooms have been completely stripped of original fittings and are now used for storage. Beyond the blast door is a 'T' shaped corridor, the first room on the left is the council safe and opposite a very small room which is literally no more than a cupboard. Along the right hand arm of the 'T' there are two rooms on the right, the first another very small room and then a larger room with another larger room opposite; being the largest room in the bunker this must have been the control room.

The filtration plant was located in this section of corridor but has now been removed. At the far end of the corridor is a locked door, we had to access to this room but we were told it was just used for document storage. The other arm of the 'T' is shorter with a dog leg to the right into the standby generator room and another locked door straight ahead. On the wall of the corridor the WB1400 carrier receiver is still in place. The generator has gone and again the room is used for storage. At the far site of the room is another heavy steel blast door, identical to the first one. Behind this is a short flight of stairs and a wooden door into the car park at the front of the building. This is the emergency exit.

The walls of the bunker are the original brick basement walls, now painted white and the corridor floor is unpainted brick.

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Most of the internal wooden doors date to the 1980's refurbishment although there is one earlier arched wooden door into one of the small rooms. There appears to be little or no added strengthening anywhere in the bunker, other than the two blast doors.

When the bunker was taken out of use at the end of the cold war the council established an 'emergency control room' in one of the small offices above and this is still in use. There are a number of radio transceivers and a TSX50 (the non ENP protected version of the SX50) ECN unit.

### **Bedminster (Bristol) Sub-Control** **by Nick Catford**



The control room

There were originally 4 civil defence sub-controls in Bristol, the only one of the four to still exist is located in a residential area of Bedminster opposite No. 10 Banwell Close. It is a single storey concrete blockhouse approximately 100 feet by 30 feet with a flat concrete roof and a door at either end. It was built in 1938 as a civil defence control centre and after the war was used by the Royal Signals then the Royal Artillery (with guns) and then nurses of the St. John Ambulance Brigade. In the early 1950's it reverted back to Civil Defence being used as a sub-control until the mid 1960's. Since then it has remained locked and unused although externally

maintained by the local council who kept the grass and weeds cut until a few years ago. They have also painted the walls with anti-climb paint although this has now dried. The years of disuse and surprising lack of vandalism have left the whole building internally covered with cobwebs.

The building consists of a main 3' wide spine corridor with operational rooms to the right and domestic rooms to the left. There are six rooms on the left, the use of the first room is unknown although it contains a table, chairs and a board with the following headings, 'Locations Board' and underneath that 5 columns with the following headings 'Control', 'Locations', 'Subordinate', 'Rendezvous' and 'Remarks'. There are a number of papers in here relating to Civil Defence and the operation of the bunker. There is also a wooden sign which once must have been fixed to the outside of the building. It said 'City and County of Bristol Civil Defence Control Enquiries C.D.O. 30 Cotham Park, Bristol'.

The next room is the male toilet which has all its fittings intact. This is followed by an 'L' shaped kitchen/dining room. Again this has its fittings intact with a sink, water heater, work top and cupboard containing fifties crockery and cutlery. Beyond this is the female toilet with its fittings intact and then a large empty room which would probably have been the dormitory. The final room on that side of the corridor is the plant room. Here there is a standby generator, ventilation plant and control boxes and switching equipment. Everything appears complete and undamaged and in reasonably good condition. From the rear of the control room a door leads into a short 'L' shaped passage leading to the rear exit (locked) and a door into a room on the right hand side of the building. Here there is a large cupboard containing more papers relating to civil defence and the running of the bunker. On the far room there is a glass window into the control room.

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The control room is the biggest room in the bunker with glass windows into rooms on either side and a window into the corridor. All the glass in all the windows is intact and unbroken. There are a large number of tables and chairs arranged in a semi circle with a small lectern on one of the tables. There are a number of wall boards to which maps could have been pinned. At one end is a large board 6' high and 7' wide with various painted headings. The board is divided into three columns. The left hand column is headed 'Available' and under this are 8 columns divided by 12 horizontal lines. The right hand column is titled 'Allocated' with 7 columns and 12 lines under it. The middle column has a title for each of the parallel lines under 'Reserve' and 'Allocated'. They are 'Depot or rendezvous area', 'Rescue', 'Ambulance', 'Sitting case cars', (Requisitioned private cars for minor injured to save using an ambulance)'Cas. col. parties', (Casualty collection parties)'M.F.A.U.', (Medical Forward Aid Unit - a kind of first aid post)'Reconnaissance' and 'Field Cable Parties' (A specialized sections of the CD Corps with cable laying trailers for laying armoured field telephone cables). The board shows what is available and where they are i.e. still at the depot or at the rendezvous point.

Beyond the control room is a communications room, again furnished with tables and chairs and 6 acoustic booths along one wall; this room has windows into the control room and into the final room on this side of the corridor which has no obvious use. There are two further boards in the comms. room; one is titled 'Locations Board' with the same headings as the other 'Locations Board'. The third board is headed 'Display board' with 'Date' and 'To be seen by' under it. There are 5 columns.

Throughout the bunker is fitted with fluorescent lights with all the tubes still intact and radiators on the walls in all the rooms. Although the building is a little damp in places it is in surprisingly good internal condition with no vandalism at all. The adjoining lock up garages have been badly vandalised (recent newspaper report) and it has been suggested that the whole area has should be cleared which would be a shame as this is a unique piece of post war civil defence history in Bristol

### **Birkenshaw (Leeds) Anti Aircraft Operations Room**

**By Nick Catford**



Operations Room

The Birkenshaw Anti Aircraft Operations Room for the Leeds Gun Defended Area (5 Group 69 Brigade) is located within the West Yorkshire Fire Brigade HQ at Birkenshaw on the outskirts of Leeds and although for a time it was used by their emergency planning unit, the lower floor is now used for storage and the upper floor houses their 'Mobilising and Communications Centre.'

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Only the back wall, one side wall and part of the front wall of the original AAOR building are visible. The building has been extended sideways in brick and this extension houses their communications centre with some ancillary equipment housed in some of the original upper level rooms. The building has also been extended outwards at the front to form their reception area.

The AAOR is of the semi-sunken variety, one floor above ground and one floor below. The whole of the upper floor has been redesigned incorporating it into the new extensions. The main staircase down has gone and there is no trace of its position at the upper level; at the lower level it has been boarded up. Access to the lower floor is by the two side stairways and wooden steps from the balcony. The original operations room with its balcony and well is intact with the curved Perspex windows still in place along two sides of the balcony. On the lower floor the room is used for storage and the balcony appears unused.

On the lower floor of the building, the structure is more recognisable as an AAOR with the ring corridor, still painted cream and all the rooms intact although now stripped of all original fittings. The standby generator and the ventilation plant have gone and these two rooms and most others are used for storage. One room is used by the Emergency Planning Unit and has an SX2000 ECN unit standing on an old engine bed. (It's unclear what originally stood here). Most of the other rooms are stacked with redundant equipment and new stores. Originally the lower floor was used as the Emergency Planning Centre, and numerous maps are still stacked in one of the corridors. Apart from the ECN, which is still operational, Emergency Planning have moved into one of many houses scattered around the site.

There is a modern communications mast on the roof together with new ventilation plant. The original second entrance at the rear of the building now houses a new standby generator. A much older communications mast, perhaps original, stands on the grass in front of the building. Various windows have been cut into the upper level walls together with a new entrance in the side.

### **Visit to Cambridge War Room/RSG 4** **by Andrew Smith**



**Cambridge Regional War Room**

On Thursday 15th March five members of Subterranea Britannica visited the Cambridge Regional War Room / RSG 4.

The two storey blockhouse is located in its' own very secure compound at the rear of the Government offices site in Brooklands Avenue on the outskirts of Cambridge. It is surrounded by a 10ft high fence topped with barbed wire. This bunker was originally built as a regional war room identical to the one at Shirley in Birmingham but had an extension added to it later when it became RSG4.

The compound is 100yds by 40yds in size

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and is in one corner of the Government (DEFRA) site. The building is currently the subject of an attempt to have it listed as it has a number of unique features and was 1 of only 2 purpose built RSG's. (That at Nottingham differs as the extension was built on top of the existing war room) The site is to be sold for housing and DEFRA have left it up to the developers to negotiate with English Heritage. If the listing application fails, the building will be demolished.

The outside of the building has some unique pebble dash panels which were put on to the structure in an attempt to make it blend in with the surrounds.

Entering the compound via the double gates we turn right and approach the blast door and enter the bunker. On the left inside the dog leg entrance are the showers, toilets and decontamination area complete with all their original 1950's fittings (hot water tank, shower curtains and curtains on the toilet cubicles instead of doors). Moving straight ahead you enter one of the 2 plant rooms from the corridor that circles the lower level. This is still in perfect order with all items intact including an electrical control cabinet and a battery rack for starting the standby generator which is housed in a separate small room. Beyond the generator along a short corridor within the plant room, the ventilation and filtration plant is also in good order.

The first half of the bunker is identical to other regional war rooms but is totally empty apart from a few filing cabinets (empty) and a large number of chairs. It is set out on 2 floors, both above ground and internally it is in excellent condition with no vandalism or evidence of water problems. The balcony around the well has been floored over but on the lower floor the original curved Perspex windows remain

intact while on the upper floor new opening windows have been installed looking onto what would have been the balcony.

The newer section of the bunker is accessed by walking along one side of the corridor past a second toilet area (one male, one female) and down a couple of steps through what was the original emergency exit to the war room. This brings you out at the end of a long corridor in the later extension. At the very far end is one of two emergency escape doors protected by a dog leg entrance lobby.

Along this corridor there are a number of rooms on each side but mid way down on the left is a very extensive, plant room containing a large standby generator (with only a few hours use on the clock) and a substantial amount of air filtration equipment. Also in this room is the boiler for heating and hot water. This room is in excellent condition and in the middle of the plant is the power distribution board. The next room on the left houses the battery starter for the generator and the emergency battery back up for powering the bunker which was almost identical to the ones installed at the bunker beneath Eton College and the Southern Water bunker at Brede in Sussex. A corridor runs round three sides of the lower level with the second emergency exit on the far side of the building where one of two stairways leads to the upper floor.

Almost opposite the plant room is a corridor and a flight of steps going up and down. Going down leads you to the oil tanks whilst going up leads to further rooms including several male and female dormitories, and a combined canteen and kitchen. Some of the kitchen appliances remain together with a long serving counter. Again all rooms in this section of the bunker are empty although there are signs on the doors as to the function of

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each room. The rooms themselves still have the partitioning in them that would have divided up the working area into many small rooms for the various agencies. There are extensive asbestos warning signs in the new section of the bunker as there are a large number of asbestos panels on the room walls.

The bunker itself was part way through a re-wire when instructions were given to stop (1991) and there are a number of cables etc. dangling from wall junction boxes and light fittings in one of the lower corridors giving the place a semi finished feel.

The BBC studio and office, at the end of this corridor appears freshly plastered and the power sockets were never fitted into the wall trunking but acoustic panels were fitted to the walls. It was very much the case of a half finished Mary Celeste! In the centre of the lower floor is a large 'L' shaped room with four small offices along one side and a large number of chairs.

The upper floor of the bunker shows some signs of water ingress in a couple of the rooms. Outside the compound is overgrown and has a number of trees in it.

The Government buildings complex that the bunker is sited on has 24hr security and the compound which the bunker sits in is securely locked. The whole site is not open to the general public, only to those with official business with the Government departments based there. Unauthorised visitors are not welcome. It can however be viewed through bushes from a public footpath on the far side of a small river that runs along one side of the compound.

### Gairloch AAOR by Nick Catford



Gairloch AAOR

Since closure, the Gairloch AAOR has been put to a number of uses. It is possible that the Civil Defence Corps used the site in the 1960's but in the 1980's the balcony and all the rooms at the front of the bunker were removed and the original entrance replaced by a large roller shutter extending well into the upper level. The large, high room so formed from the original two level control room has been and still is used by the Highlands Roads Department as a vehicle repair depot. In 1988 the rest of the building was converted into Highland Council's standby

Fronting on to the road is a small block of offices, possibly contemporary with the AAOR, which are now used by the North of Scotland Water Authority; the AAOR blockhouse is in the yard behind. It is a two level above ground structure built to the standard design although there have been modifications externally as well as internally. A gently angled hipped roof has been added to aid water drainage and the small 'chimney' in one corner has been removed. A small extension with a new main entrance into the emergency centre has been added on the south face. While

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the original 'main' entrance has been replaced by the roller shutters the original rear entrance with its covered porch still exists although the original door (leaning against a wall) has been replaced by a heavy steel and concrete

Inside the new 'front door' the main stairway, balcony and front rooms have been removed. A stub end of the upper corridor can still be seen with a rail across it but this no longer gives access to the rest of the bunker and can only be accessed by ladder. Inside the entrance the generator would have been immediately to the left and the ventilation plant to the right; both these rooms still exist and have been fitted with heavy blast doors. The former standby generator room is empty but the former plant room now house the new standby generator with just 6 hours on the clock. Alongside these two rooms are two further rooms used as a store by the roads department and not within the gas tight 'U' of the emergency centre. Access to the remains of the lower ring corridor is through two heavy blast doors, one on either side of the repair shop. The rest of the lower floor including four stairways to the upper level and male and female toilets is largely unaltered with most of the rooms now empty. One of the rooms at the bottom of one of the stairways is lined on both sides with acoustic booths and would have been the communications room for the emergency centre. The room opposite the rear entrance is used as a store containing large quantities of boxed chemical toilets, paraffin lamps and other emergency supplies.

On the upper floor the front rooms and front section of the ring corridor has been removed and some of the partition walls between rooms have also been removed forming new large rooms along the two 'sides'. One of these is used by the roads

department for storage of road signs etc. There is an opening with a rail across down into the former well below with a large steel sheet with a gas tight seal that can be bolted across it if required. On the other side the 'new' room is empty apart from some electrical switchgear in floor standing cabinets at one end and a door into the new ventilation plant room beyond. As well as the ventilation and filtration plant there are also various control cabinets. At the rear of the upper floor is a small kitchen and canteen/recreation area. Throughout the bunker all the ventilation trunking has been replaced.

Although the roads depot is still used there are plans to demolish the building and erect new housing on the site.

### **Bittern sub-control** **by Nick Catford**

The Bittern sub-control has been incorporated into the rear garden of a house in Somerset Avenue. It consists of a custom built surface blockhouse which last saw active service as a control centre in 1968; it is in amazingly good internal condition. Passing through the main entrance, the passage turns right into an airlock. On the outer door are the words 'Air lock doors to be kept shut when ventilating plant is working'. Passing through the inner door, the passage turns left into the main corridor. The first room on the right has 'Plant room - no admittance' on the door. Inside the ventilation plant is in good order although the standby generator at the rear has been removed.

The main corridor turns to the right where there is a small room with 'Pantry' on the door. This room contains a 1950's electric stove, sink, water heater, large kettle, teapot and a cupboard containing a large quantity of 1950's crockery. Next to the

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pantry are two rooms one has 'Women's dormitory' on the door and the other has 'Men's dormitory'. There is a ladder on the wall of the men's dormitory leading to an emergency escape hatch in the roof; this has now been welded shut. At the far end of the main corridor, before it turns right into the dormitories are the men's and women's toilets each containing two cubicles, a basin and a water heater.

The first room on the left hand side of the main corridor has 'Communications' on the door with acoustic booths located along both walls and a small message passing window back into the main corridor.

The final room, alongside the communications room has 'Operations' on the door. Inside there is a large 12" to 1 mile map of Southampton on the wall, it is now in a dilapidated state. There are blackboards either side of the map, one is headed 'Locations Board' with 5 columns 'Control', 'Location', 'Sub-ordinate control', 'R.V.' and 'Remarks'. The other is headed 'Resources Board' this is sub-divided into two columns, 'Available' and 'Allocated' The available column is itself sub-divided into two columns, 'Ops. Base' and 'R.V.' There are also several tables, a small door in the far wall marked 'Emergency Exit' leading to a second ladder up onto the roof. A second message passing window links to the communications room. There is ventilation trunking around the bunker and all the woodwork is painted green. In the operations room and the communications room there are three coloured lights (red, amber and green), perhaps for indicating alert state. The communications room is used for storage by the house owner but most of the other rooms are empty and unused. The owner has installed lights in the corridor, ops room and communications room. The bunker is clean and dry. Note: the bunker is not visible from the road and the owner would not welcome casual visitors.

### **Crawley Borough Emergency Centre (West Sussex) - by Nick Catford**

The Crawley emergency centre is located in the basement of the Town Hall extension which was under construction in 1979 with the aid of a Home, Office grant. The bunker, at the bottom of a flight of steps, is accessed through a heavy steel and concrete blast door straight into the decontamination room. The main feature of this room is a huge communal tiled shower sufficient for at least 8 people at one time. Opposite the shower a wooden door leads into the standby generator room. The generator with its adjacent switchgear is in excellent condition with only a few hours on the clock; it is regularly tested. The room is described on the official plan as an 'airlock' but the door into the short spine corridor is wooden and definitely not gas tight. To the left were the dormitory, toilets, kitchen, controllers room and rest room. The controller or 'co-ordinator' as it says on the door moved to a new office in the Town Hall in the summer of 2001 although all his wooden furniture is still in place. The former dormitory and rest room (more recently used as a briefing room) have been stripped and are currently being used for storage of ballot boxes and other election paraphernalia. The unisex flushing toilets are intact as is the functional kitchen with a large number of white kitchen cabinets and the usual array of kitchen equipment. With the exception of the kitchen and toilet, all the rooms in this part of the bunker are to be completely stripped and emptied and will be used for the storage of surplus furniture etc.

At the far end of the corridor is the working end of the bunker which will be retained as the Borough Emergency Centre. Regular exercises are held there and although the emergency planning team only consists of one person, the EPO, he can call on



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around ten council and liaison staff to man the bunker in the event of an emergency. The corridor gives access directly into the control room which has the usual array of tables, chairs, audio visual equipment and local wall maps and charts.

Three rooms are accessed from the control room. The communications room is lined with acoustic booths along each wall. The council have recently installed a new radio system to replace the unreliable network of CB radios that had previously been used. Normally Raynet would be involved with the communications network but at Crawley they are unable to help and the service is provided by the Crawley Amateur Radio Club. The second room is the liaison room (formerly scientific advisors room) which is sparsely furnished and the final room is the ventilation plant room with its modern plant in good order and in use; the SX50 Emergency Communications Network unit also stands in this room. A small blast door in one wall was the emergency exit. This consisted of a horizontal tube leading to a vertical ladder up to the car park. The horizontal tube acted as a gathering point for water which used to flood into the bunker if the escape door was opened. As an emergency exit is no longer required the fire brigade was asked to pump out the tube which has now been filled with concrete.

### **Fareham Borough Emergency Centre (Hampshire)**

**by Nick Catford**

The Fareham Borough emergency centre was at Fort Fareham (SU573049) which now houses the Fort Fareham Industrial Estate with many of the old barrack buildings and tunnels converted into light industrial units. Fort Fareham was home to two cold war structures the Fareham Borough Emergency Centre and the 2

Group AAOR (Anti Aircraft Operations Room) for the Portsmouth and Southampton GDA (Gun Defended Area). The Emergency Centre, which was opened in the 1980's is located in old magazines and the forts south west caponier (a covered passage projecting into or across a dry ditch or moat to provide flanking fire). Once inside the fort, the entrance to the tunnels is in the rampart on the left hand side behind an old caravan that is parked under a small arched bridge. Behind two wooden doors are two heavy steel and concrete blast doors.

Immediately inside the blast doors there is a lobby area with ventilation and filtration plant still in place on the left and on the



The south west caponier which housed the control room. Note the ventilation plant on the right

right the entrance to three old magazines which formed part of the emergency centre. The three rooms, which all interconnect have white painted walls and still have heavy metal rings in the ceiling for hoisting the ammunition. The rooms are

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now empty apart from the far one which has a wrecked communications rack consisting of a transmitter, receiver and power supply on the floor; there is also a BT junction box on the wall. This room is sub divided with a wooden partition. There is a lighting passage (a narrow passage surrounding a magazine with glazed apertures for oil lights in the walls between the passage and the magazine) but all the lighting apertures have been bricked up.

The northern lighting passage is blocked at the far end but the southern passage turns to the left down two steps into the south west caponier. To the right is a heavy steel and concrete blast door which gives access to the standby generator room. The room has been stripped apart from exhaust piping and three concrete plinths which indicates that there were probably two generators and a control cabinet. Beyond these plinths is a second blast door which leads back onto the parade ground. Turning left from the lighting passage the tunnel bends round to the right and widens out into the caponier. There is ventilation trucking mounted on the ceiling and several recesses left and right where the guns would have been housed. One of these recesses contains two water tanks and another contains more filtration plant similar to that at the entrance. At the end of the caponier there is a bricked up arch but it is unclear where this leads to. It was probably bricked up when the caponier, which contained the centres control room, was converted.

The AAOR was located in the northern end of the barrack block on the far side of the parade ground. The building is currently empty and available for rent. Internally there is little evidence of its days as an AAOR although the male and female toilets are intact as is the framework of one of the plotting tables. There appeared to be a chimney like structure on the roof that

looked similar but not identical to those found on standard AAOR bunkers.

### **Highland Council Emergency Centre** **by Nick Catford**

The Highland Emergency Centre is located at Raigmore in Inverness. The bunker is one of three that formed the RAF 13 Group Control during the last war. Of the three, only the filter room is still extant. It was used by the Civil Defence Corps from 1958 - 1968 and was then used by the ROC in addition to their own protected accommodation in the former control bunker. In more recent times it was used by a local theatre group for painting scenery which was suspended from the balcony.

In 1988 the site was acquired by the Highland Council and with a 90% Government grant it was converted into their emergency centre, also incorporating the Inverness Borough Emergency Centre. Externally the grass mounded bunker is little altered although the main access has been rebuilt. There is a large lattice communications tower at the rear and a porter cabin in front which is used by the emergency planning team as their day to day office. In times of emergency, however small, a team is moved into the bunker.

The filter room was identical to those at Watnall, Goosnargh and Kenton, built on two levels with an operations room in the centre and a balcony looking down into the 'well'. During the conversion, the balcony was floored across.

Inside the new 'front door', steps lead down through a decontamination area and blast doors into the main upper corridor running around two and a half sides of the bunker. The room formed from flooring

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across the balcony now houses a conference and briefing suite consisting of the main conference room with a large central table, chairs, projection screen and audio visual equipment, around it are five smaller rooms. The two dormitories are on this level although their beds have now been removed and adjacent to them is the controllers room and sleeping quarters. The original stairs are still in use at both ends with the male toilets adjacent to the stairs at the west end and the ventilation plant room at the eastern end with a workshop alongside.

All the ventilation plant was new in 1988 and it includes two modern racing bicycles (including gears and back brake) mounted on concrete plinths. Their front wheels have been removed and the back wheels are connected to a belt drive. (This practice was common place during the last war and has recently been noted in STASI bunkers in East Germany) These would have been used to keep the air circulating in the event of a power failure. At the rear of the room two steps lead up to a small filter room. A collection of ex-ROC equipment is kept in the workshop including a 'Secomec' hand operated siren, ground zero indicator (GZI), bomb power indicator (BPI), two portable dosimeters with chargers and a variety of different radiation meters. There is also a complete aircraft instrument from a nearby post consisting of a tripod, circular metal chart and the Micklethwaite sighting instrument. Close to the workshop is the second exit consisting of two heavy blast doors and a short flight of stairs up to the original emergency exit. Between the two blast doors is a blanket store with blankets still there ready for use.

The hub of the new bunker is on the lower floor where the original well floor now forms the control room with desks and computer terminals for the various

agencies and maps around the walls. Adjacent to the control room is the radio room consisting of acoustic booths along each wall and at one end the Communications Centre. At most emergency centres Raynet provide an important part of the communications network but unusually they were unable to provide the service here and a local amateur radio group has been formed to provide this function. Next to the Communications Centre a room has been set aside for the Service Liaison Officer if the services were involved in the emergency and next to that is the small telephone exchange but without the usual ECN unit.

From the telephone exchange, a few steps lead down to what would have been the original ventilation plant area. This has now been divided into several rooms including a ten bay help line which was manned through the 2001 foot and mouth crisis and beyond that the generator room leading through into the tank room.

The two Perkins diesel generators are kept permanently heated to 60 degrees to aid easy starting. They have a small fuel tank alongside which is automatically filled from the main tanks on the surface. As this is a 'dirty' area there is an air lock with two gas tight doors and a shower between the room and the main lower corridor which again runs around two and a half sides of the bunker. On the west side of the control room is the kitchen and canteen with female toilets along the eastern end corridor.

The bunker is kept in a state of readiness and is regularly used for training exercises. When fully manned there would be a staff of approximately 30, a small number for such a large bunker.

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### **Horsham District Emergency Centre (West Sussex) - by Nick Catford**

The Horsham District Emergency Centre (This was also the West Sussex County Standby) is located in the basement of a 1984 brick council block opposite the Town Hall. It was built with the aid of an 80% Home Office grant and like Crawley is still fully operational holding regular exercises; it is also used by council staff for IT training for. A flight of steps from the covered car park gives access to a heavy steel and concrete blast door beyond which is a second blast door forming an airlock. This is described on the official plan as a decontamination area but there is no shower. A third heavy blast door is located within the airlock giving access to the standby generator room and the generator, like that at Crawley, has only a few hours on the clock. At the rear of the room a small blast door on the wall gives access to a small filter room.

Beyond the airlock is a very short corridor with yet another blast door at the far end, this is one of two emergency exits back into the underground car park. On the left hand side of the corridor are two rooms, the former dormitory now stripped and used for storage and the ventilation plant room with one pump and filter unit and yet another small blast door in the rear wall leading to another small filter room. On the other side of the corridor a door leads into the control room with tables, chairs, audio visual equipment and wall maps and charts. To make the room seem more 'homely', all the maps are covered by patterned curtains as are the corridors and stairs hiding the plain white walls.

Four rooms are accessed from the control room, on the far side a small room (originally the first aid room) houses the SX50 ECN unit and the second emergency

exit into the underground car park through a five foot high blast door. Other rooms are the 'L' shaped unisex toilet, small but functional kitchen, controllers room and the communications room with acoustic booths along two walls. Two licensed amateur radio operators help provide the emergency communications network and as back up CB radio is used with repeater stations giving a range almost to the south coast. When fully manned up to 22 people might be in the bunker.

### **INVERKIP AAOR by Nick Catford**



The burnt out operations room at Inverkip AAOR

The former Anti Aircraft Operations Room at Inverkip on the Scottish west coast was in 3 Group 77 Brigade serving the Clyde Anchorage gun defended area (GDA). The bunker is of the standard AAOR design, both entrances being on the upper level which is above ground, the lower storey being below ground.

The bunker is located within a fenced compound in a wooded area on the south side of an unmade track to The Langhouse Hotel at NS215720. Several years ago the building was severely damaged by fire and as a result of the fire brigade putting the

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fire out and some seepage the lower floor is now flooded to a depth of 15".

All the walls are covered in thick soot. The seat of the fire appears to have been the balcony which is badly damaged. All the curved Perspex windows have gone and most of the timber is badly burnt. Strangely the fire doesn't seem to have migrated downwards and the wooden stairway directly from the balcony into the well is only slightly singed and is perfectly usable. Most of the rooms on this level have been stripped out but the guard room immediately inside the front entrance retains an intercom unit and a rifle rack. Next to it is the kitchen with a cooker, sink and draining board and along one side is a room with a large blackboard mounted on one wall with the following painted column headings: 'Port or assembly anchorage', 'Ships in port' (with sub headings: 'Ready to sail in next 24 hours', 'Requiring Bunkers' [ships awaiting fueling], 'Total', 'Expected arrivals in next 24 hours' and 'Remarks'. Another board in the same room is headed 'Main plot' These boards refer to the buildings later use as a naval control centre under the name HMS Dalriada. When it was no longer required as an AAOR it was handed over to the Navy, remaining in use at least until the mid 1970's. The toilets, with most appliances smashed are also on this level with an other board lying on the floor with two columns: 'Ships at Sea' and 'Ships in Port'.

The lower level of the bunker is mainly undamaged by the fire although there is soot on the walls in places. One of the rooms contains one of the original plotting tables with its Perspex map screen broken into several pieces. It is still possible to make out some of the wording on it. On the wall there is a large board headed 'Aircraft State' it has the following columns: 'Type', 'Where', 'S/US', 'Due S' and

'Remarks'. This may be from the buildings earlier use as an AAOR.

The most interesting room on this level is the communications room which has a long table along one wall with compartments underneath it and a wooden framework above it with more compartments. There is a separate teleprinter table with its teleprinter intact and on the far side of the room is a large floor standing electrical cabinet full of relays and transformers etc. In a small adjacent room is a large GPO distribution frame. There is another smaller communication room nearby with acoustic booths along both walls. Other rooms on this level include the boiler room, ventilation plant room and standby generator room which all have their plant still in situ although partially under water.

### **Lippitts Hill AAOR** **by Nick Catford**

Lippitts Hill first saw action in the first world war as an anti-aircraft site and remained operational through the second world war eventually becoming a POW camp, housing both Italian and German Prisoners until 1948. It was used as an army training camp between the wars.

After the war the site was home to an Anti Aircraft Operations Room (TQ397970) serving the London North GDA (Gun defended area) in No. 1 Group, the bunker housing the control centre being built in 1953.

In the early 1960's the site had become surplus to requirements and was acquired by the Metropolitan Police as their North London emergency war HQ. A similar bunker at Merstham adjacent to the M25 in Surrey became their southern HQ. Both

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bunkers ceased to be used for this purpose in 1989. Merstham was eventually sold but Lippitts Hill, which is a large site, is now used as the National Police Training Centre with firearms, pursuit and all other kinds of training undertaken. Helicopters of the Police Air Support Unit cover southeast England from a purpose built heliport.

I would like to thank the Met Police for allowing a visit. The bunker itself is visible, albeit through trees, from the public road and the footpath that rings the camp. The bunker is within its own secure enclosure. It has a large aerial mast (still in use) at one side and various other aerials attached to the wall. It is painted dark green and externally is in excellent condition. It is on two levels, one above ground and the other sunken. Both entrances are on the upper level. Internally everything is painted light cream and appears little changed from operational days although there appears to be a certain amount of extra wiring and smoke detectors have been fitted.

The balcony around the central well is intact and it still retains its original woodwork and distinctive curved Perspex windows. All three rooms around the balcony appear to be unused. The window through to the upper control room has been boarded up this room is used for gas training as was evident from the pungent smell. There is a small operational kitchen on this level but most of the other rooms are used for storage (mainly targets) or are empty. There are two stairways down to the lower level.

Both the operations room well and the rooms adjoining each side have been converted into a gym and contain various pieces of apparatus. As with the upper floor, there is a corridor running around the

lower floor. The ventilation plant room retains its original plant in excellent working condition including an ozone generator. Unfortunately the key to the standby generator room didn't fit the lock so I am unable to report on that or the boiler. Most of the other rooms on this level were locked and inaccessible including the radio room, which is still in use. There were no restrictions to photography in the bunker.

Much of the camp remains with its original wartime hutting intact and in use. Some of the huts are still used as dormitories and the original kitchen/canteen is still in use. At the top of a short hill is the gun site itself. Two of the gun pits still remain standing 5' high. They have however been infilled with soil and are used for dog training. Close to one of the pits the sunken magazine is still extant and in good condition. Close to the other pit the battery command post also stands. One door into it is locked and another section is partially flooded.

Other structures still remaining included the gun store, MT shed and a concrete ramp that may have been the radar platform.

At the southwest corner of the site is a war memorial to the US 184th AAA Battery who manned the guns after America's entry into the war. The memorial is now outside the camp and accessible from the footpath around the perimeter.

### **North Avon District (Gloucestershire) Emergency Centre**

**by Nick Catford**

The former North Avon District Council Emergency Centre is located in the basement of the (now) South

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Gloucestershire District Council offices in Castle Street, Thornbury. The bunker was built in 1985 with a total grant of £72,000 from the government. For a district council bunker it is unusually small and is only semi sunken with access down a few stairs from the rear of the building. At the bottom of the stairs is a corridor, at one end, a heavy steel and concrete blast door gives access to the bunker with a second double blast door/air lock at the far end of the corridor. There is no real emergency exit directly to the outside of the building just a second door back into the unprotected part of the basement.

Once inside the first blast door there is a small lobby area with two further blast doors, one into the standby generator room where the generator and its fuel tanks are still in place. The other leads directly into the control room which has a supporting pillar close to one end. This room is divided into several areas, to one side of the control room is the communications area where the government ECN, an SX50 is still in place and operational. Next to the comms. area is a small kitchen (no dividing walls) just a single partition with an open front into the control room. The kitchen is still fully equipped with all the usual facilities including a water tank at the rear. To one side of the kitchen there is another supporting pillar, another water tank and two chemical toilets. These are plumbed in ready for use including hand pumps. Again there are no partition walls and the two toilets sit next to each other looking directly into the kitchen. At the rear of the control room a door leads into the dormitory. The ventilation plant is also located here in the metal trunking on the ceiling. It is very basic consisting of circulating plant within the trunking that blows air into the control room. On the other side of the dormitory is another blast door giving access to a small lobby area/air lock and the final blast door

back into the corridor. There is another room accessed from the corridor at this point but this is outside the bunker and should not be considered a part of it.

The bunker was de-commissioned in 1994 although it had never been used as a peace time emergency centre and had never had its maps or any equipment installed other than the ECN. In the event of a nuclear attack or a civil emergency it would have been manned by 6 people.

### Visit to RAF Neatishead

by Nick Catford (Historical information from RAF Air Defence Radar Museum)



The United Kingdom Air Surveillance and Control System (UK ASACS) is comprised of a number of individual static and mobile units which provide the minute-to-minute information on air activity required to defend the UK and our NATO partners. Manned by officers of the Fighter Control specialization of the Operations Support Branch with the support of airmen

Aerospace Systems Operators, the UK ASACS is a highly sophisticated computer-

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based system which gathers and disseminates information on all aircraft flying in and around the UK Air Defence Region - this is known as the Recognized Air Picture (RAP). The information within the RAP is used by the Air Defence Commander when deciding whether to investigate or perhaps even destroy an aircraft flying in an area without permission. Information is fed into the RAP from the RAF's ground-based radars and from the air defence systems of our neighbouring NATO partners. However, the UK ASACS can also receive information via digital data-links from other ground, air or sea-based units including No 1 Air Control Centre, which as a part of the UK's Rapid Reaction Force holds a high state of readiness to deploy world-wide in support of crisis.

The United Kingdom Air Operations Centre (UKCAOC) is situated within Headquarters Strike Command at RAF High Wycombe. The UKCAOC is responsible for the overall coordination of the Air Defence, Ground Attack and Maritime Air elements of the RAF together with the air forces and navies of our NATO partners. It is from the UKCAOC that the Duty Controller orders any reaction in response to the UK ASACS's vigil over UK National and NATO airspace. The configuration of the UK ASACS is monitored and controlled 24 hours a day by a dedicated team working within the UKCAOC.

The UK ASACS has 2 operational Control and Reporting Centres (CRCs) based at RAF Buchan north of Aberdeen, and at RAF Neatishead which is north-east of Norwich. An additional stand-by CRC is found at RAF Boulmer in Northumberland. The CRCs are the linchpins within the UK ASACS, each with their own geographical areas of responsibility, roughly split north and south of Newcastle. Within their own areas, the CRCs receive and process

information provided round-the-clock by military and civilian radars to produce the RAP. In addition to this radar data, the CRCs also exchange information using digital data-links with neighbouring NATO partners, AEW aircraft and ships. However, the production of the RAP is only one part of the CRCs duties, the second being the control of aircraft. While Fighter Controllers at Buchan and Neatishead provide the tactical control required for our Air Defence aircraft to police the UK's airspace in peace and war, they are also involved in the peacetime training of the RAF's Air Defence assets. Moreover, Fighter Controllers also provide support to Ground Attack forces when undertaking training with their Air Defence counterparts.

RAF Neatishead was established during World War II. Its function was to carry out ground controlled interceptions with the aid of plan position radar displays. The first radar at Neatishead was the Type 7 radar, installed in September 1941 and soon operational with an establishment of two officers and forty airmen and airwomen who were billeted in a local village. Training commenced with 255 Squadron, equipped with the Beaufighter Mk2. In March 1942, two Beaufighters were vectored on to a heinkel 111, which was damaged. On 28th April 1942, the Station achieved its first kill when a Czech Warrant Officer Pilot of 68 Squadron shot down an enemy aircraft while being controlled by Neatishead.

During the war the Station also participated in the legendary 'Windows' trials. 'Windows' consisted of strips of aluminium dropped in bundles by aircraft. It was designed to produce false targets on enemy radar displays as well as hiding friendly aircraft on bombing raids. In March 1943, Neatishead was visited by King George IV and Queen Elizabeth. In March



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1947, the Station was established as a Sector Operations Centre and on the 1st July 1953 was renamed 271 Signals Unit. In July 1959, the Type 7 Mk 4 radar became operational and, in the following year, FPS 6 height finding radars were commissioned. From 1961 to 1963, the Station became non operational under a state of 'care and maintenance' and was then reopened as a Master Radar Station, equipped with a Type 84 radar. A serious fire during February 1966 completely destroyed the underground operations complex, necessitating closure of the Station.

In April 1974, Neatishead became an operational base again operating with a new data-handling system above ground in the original 'Happidrome', the old World War II operations room. At this time Neatishead was responsible for the control of fighter aircraft located at Royal Air Force bases Conningsby, Wattisham, Coltishall, Binbrook, as well as Victor tankers based at Marham and Shackleton Airborne Early Warning aircraft from Lossiemouth. Neatishead has also provided control for United Kingdom based American fighter aircraft since 1974 to the present day.

The 1980's saw the introduction of an Integrated Command & Control System (ICCS). The concept was designed to upgrade the existing air defence system into the most advanced anywhere in the World. The concept required the refurbishment of the underground R3 bunker with an advanced data-handling system, as well as the purchase of new digital, phased array, transportable radars. These radars were to be capable of rapid deployment to pre-prepared sited and transmit their data back via secure communications. Modern 90 series radars were located at Trimmingham and Hopton. The move back underground started in 1992 and was completed when

Neatishead became operational with the new ICCS equipment in April 1993. In September 1996 the Type 91 was moved from Trimmingham to Weybourne and de-built in October 1997. At the same time the Type 93 became operational at Trimmingham, having been moved from Hopton in April 1997.

The old operations building which housed the old equipment has been preserved as a museum called the Air Defence Battle Command & Control (ADBCC) Museum. It covers the secret history of radar and command & control from 1935 to 1990. The Type 85 radar was dismantled in the late 1980s, however, it is hoped that the old Type 84 radar, although still operational in 1994, will eventually form part of the museum exhibits. The Museum opened in October 1994.

Each year the Museum hold a 'Friends' day. For an annual fee of £8 you can become a 'Friend of the Air Defence Radar Museum.' which entitles you to free entry into the museum at any time and on the 'Friends' open day there is also a tour of the operational R3 bunker containing the Integrated Command & Control System. This tour is not available to ordinary members of the public who visit the museum and even 'Friends' are only allowed to visit the bunker once.

On Saturday 30th June 2001 over 100 'Friends' including 5 members of Subterranea Britannica (Nick Catford, Robin Ware, Keith Ward, Rod Siebert, Richard Lamont) visited the museum on a glorious summer's day. There are in fact three bunkers on the site, the WW2 'Happidrome' (Operations Room), the R3 underground bunker and a huge R12 blockhouse similar in size to the R6 at Hack Green. This originally housed computers on the lower floor, transmitters

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on the top floor with a radar array mounted on the roof. Today it is only used for storage by the museum but is a very impressive building, painted dark green and quite imposing. The museum itself is in its own compound within the base and utilises a separate entrance so it is not possible for members of the public to wander into restricted areas. On arrival we had ample time to see the museum before the highlight of the day, the trip into the R3.

Displays included, command and control of ground based and airborne radar systems, WWII Operations at home and overseas, surface to air missiles, radar engineering, communications systems, the development of detection from sound (soundmirrors) to modern computerised radar systems, air intelligence photography, space surveillance and defence. There are two mock up ROC posts, one from the war and one nuclear monitoring room, an accurate recreation of a 1942 GCI operations Room and what has to be the museum's star attraction, the original Cold War Ops room used until 1993 when the R3 bunker was refurbished. The room is complete with all its original equipment and it certainly made an impressive sight with the lights dimmed and everything operating. The only disappointment was that there were no displays of equipment from the 'rotor' period for which the R3 bunker was originally built and little mention of Rotor anywhere in the displays. I asked the museums curator and he told me that much original equipment was destroyed in the fire in 1966 and it has proved impossible to obtain any equipment from other derelict rotor sites where everything was quickly scrapped out.

After visiting the museum we split into two parties and those on the morning tour were taken to the former rotor guardhouse on the far side of the base by coach. The

guardhouse is of the standard 'bungalow' design with an extension on one side. Once inside the entrance we descended a short flight of stairs with a winch for heavy equipment in the well. At the bottom of the stairs a sloping passage and a dog leg left and right followed by two heavy blast doors slightly forward of their original position (which could still be made out from the markings on the wall). Through another dog leg brought us to the main upper spine corridor with a stairway and another winch down to the lower level. On the left is the 'upper ops room'. This was originally a two level room with windows looking down into the well below. It has now been converted into the two separate ops rooms, each filled with aging (1960's) consoles and 1980's computers and monitors.

All this equipment is due to be stripped out in 2003 and replaced with the latest off the shelf technology. Neatishead is operational 24 hours a day but at weekend military traffic is light with only a handful of staff in residence in the bunker. During the week there would be approximately 40 controllers plus other technicians and support staff. It was interesting to note six folding bunks fixed to the wall of one of the spine corridors. At the far end of the corridor there was a second stairway down to the lower level and beyond that the emergency exit consisting of stairway that leads to two separate diverging exits.

Although the bunker has been much modified since the fire much of the structure is recognisable with the main plant room in its usual place in the lower floor.

After the bunker tour we rejoined the rest of the 'Friends' in the officers mess for a group photographs which included several former station commanders who were attending on this day on which we were also celebrating the 60th anniversary of

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RAF Neatishead. Following a top quality lunch in the mess we retired to the balcony where there was a low level fly past by a Jaguar followed a few mounted later by a Nimrod. Anglia TV were there to record the event.

### Reading regional war room by Nick Catford



Reading War Room

Whiteknights Park, Reading was acquired by Reading University before the war but as the large area was not required at the time a part of it was used for government offices (single storey H blocks) and in the early 1950's one of the 14 regional war rooms was built on the site. Although the war room quickly became obsolete, it remained in government hands and until the end of the cold war it was used as a standby communications centre for Warren Row. After 1991 it was disused and together with the H blocks which still stood was handed back to the university who now use the lower floor for storage, with further storage and biology labs on the upper floor.

The building is of the semi sunken variety,

i.e. two floors, one above and one below ground. It is approximately 100' X 80' with two identical wooden doors on the long faces and three ventilation towers on the roof along one side. Each of the wooden doors leads to a short dog leg corridor and a substantial blast door. On the outside of each blast door is an alert state board. Inside each blast door is a toilet and decontamination room consisting of showers, wash basins and toilet cubicles. One of these has been stripped out and is used for storage, the other is complete although the water is not connected and is out of use. There is a corridor going round the four sides of the building with the former balcony overlooking the control room in the centre now floored over and used for storage. The rooms along the outside of the corridor are used by various university departments, some being utilised as biology labs. Along one side are the two plant rooms containing the ventilation and filtration plant, the standby generator and the associated control equipment. All this plant is in running order and the ventilation plant was in use at the time of our visit. The generator appeared in excellent condition and is run regularly. Ventilation trunking runs along the ceiling of the corridor and into each room and the corridor itself appears rather shabby. Close to each entrance door is a stairway down to the lower level with a water tank above each stairway.

The lower floor is damp and following the heavy rain in the spring of 2001 there has been up to 2 inches of water on the floor damaging some of the library archives that are stored in the rooms. Again there is a ring corridor around the lower floor. Many of the rooms have message passing windows between them. The former control room is in the centre of the building has shuttered windows into the adjacent rooms. The curved Perspex has been removed but the shutters are still in place

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on some of the windows. Most of these rooms are stacked from floor to ceiling with metal shelving containing the library archives making examination difficult.

In one room there is a hole in the ceiling where a wire operated basket could have been winched up to the upper floor with messages. (This message passing system is intact in the Shirley war room in Birmingham). In one room there is a large half inch to one mile map of central southern England that appears to date from the 1950's or early 1960's. The map is divided into regions and sub regions and various symbols are shown indicating rest centres, assembly Points and other Civil Defence welfare locations in each parish. The map appears to predate the Royal Observer Corps' nuclear role as no posts or group headquarters are shown. The positions of local authority and county emergency centres and standby emergency centres are shown.

Because of the damp conditions, especially on the lower floor, the library are planning to move their substantial archive out of the building but according to University staff there are no plans to demolish it, they would in fact, welcome some kind of listing and perhaps a grant towards maintenance. The H blocks however are due for demolition.

### **Visit to RGHQ 6.1 and Aspidistra** **by Nick Catford**

On Saturday 28th July 2001 12 members of Subterranea Britannica visited RGHQ 6.1 at Kings Standing near Crowborough in Sussex, we were also able to see the remaining buildings from the Aspidistra Complex, a WW2 'Black Propaganda' radio station, later used by the BBC to broadcast their World Service to Europe. The whole site is now owned by Sussex Police who use it for training.

The entrance is on the B2188 at TQ473291 where the original guardhouse still stands at the entrance gate. Having passed through the gate into the outer compound we proceeded along a road passing a circular brick building on our right, approximately 100 yards from the road. This building housed an aerial allocator, the feeds from the various transmitters would first go to this building where they would be fed to the appropriate aerial array consisting of rhomboid shaped wire aerials strung between 30 or so aerial masts spread around the complex. Although all the original transmission aerials have now gone the concrete bases where the masts were guyed are to be



seen everywhere. The aerial allocator building still has the glass insulators around the top of the wall allowing the aerial feed to pass out of the building. After about 200 yards we entered the middle fenced compound and immediately through the gate on our left was the gate into the inner compound containing the RGHQ bunker and the one remaining radio mast, erected in the mid 1980's. The bunker was built between 1984 - 1986 replacing the former RGHQ in 'Dumpy' Level at Dover Castle. It was closed in 1992 following the end of the Cold War

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and the whole site was bought by Sussex Police in 1996 for £200,000.

There is no raised mound indicating that the whole of the bunker is below ground with only the four concrete ventilation towers protruding from the ground. A sunken roadway leads to the entrance blast door which gives access to a lobby area with three heavy blast doors. Two of these are for heavy equipment leading directly into the plant area and the narrower door is the main entrance into the bunker. There is also a 'dirty' access into the bunker through a decontamination room with showers.

The original 'Aspidistra' bunker which housed a 500 kilowatt medium wave transmitter was constructed by a Canadian Army road building unit by excavating a 50 foot deep hole. This was roofed with reinforced concrete, four feet thick. The site took three weeks to excavate with the 600 strong civilian work force working 24 hours a day and the transmitter complex was completed within 9 months of receiving approval from Churchill. Aspidistra was ready in early 1942 but did not come on line until 8th November with pre-recorded speeches from President Roosevelt and General Eisenhower on the American landings in North Africa.

The three level RGHQ bunker was constructed by completely gutting the WW2 Aspidistra bunker, inserting an intermediate floor in what was the cable tunnel between floors (as at Skendleby) with additions to the upper floor to house the plant. The only part of the original Aspidistra bunker remaining is the entrance tunnel at the lowest level (now floor 1). The highest level, our point of access, is floor 3. Immediately inside the bunker are the two plant rooms one containing all the ventilation and filtration

equipment and its associated rack of floor standing control cabinets. This plant is still in good order and permanently running, as are the pumps which ensures that the bottom level remains dry. Adjacent to the ventilation plant room are the two standby generators which are tested regularly and kept in good order. Between the two rooms is a small engineers room with a large chart draw where all the plans of the bunker, including those from the WW2 bunker are kept. One of the larger blast doors enters this room directly.

These rooms are in the extension and along the passageway leading into the main body of the bunker is the canteen and kitchen. This is a long narrow room, smaller than at similar bunkers but adequate to feed the 150 people who would have been working there had there been an attack. The canteen area is surrounded by wooden trellis garden fence panels, reminiscent of a restaurant, with a serving hatch into the fairly spartan kitchen, again much smaller than at similar bunkers. The canteen is still used by the police during the week but hot food is brought in from elsewhere so there is no need to employ a cook and ancillary kitchen staff.

Having passed the kitchen/canteen, the main corridor passes through 90 degrees into the main body of the bunker, on our left and right are the large dormitories. These were fully fitted when the police took over the bunker but the beds have since been sold and the sheets and blankets sent to Kosovo. It's still possible to see how closely the double bunks were positioned to each other, with only room for a narrow floor standing cabinet for personal belongings. Narrow as these cabinets are each one is divided into two and was used by two people. One of the dormitories although completely empty is used by the police as a gym, while the

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other, containing all the dormitory lockers is a recreation area with a modern vending machine. At the end of the north - south spine corridor are the stairs down to the lower levels, both the stairs and the landings are constructed of metal slats giving a view down to the bottom level. Beyond the stairs is a short tunnel and a set of concrete stairs leading to the north emergency exit with a heavy blast door (and beyond it a fire door) out to the surface.

The middle level is basically two very large 'L' shaped rooms which were the administration area of the bunker, these would have housed all the desks for the various agencies and a hinged panel on the floor where there is a phone and power socket shows the position of each desk. There is a ladder on one wall giving access to a small tank room. Both rooms are now completely empty apart for modern chairs and are used by the police for lectures etc. We were unable to see inside any of the rooms on the lowest level (floor 1) as they are used to store evidence but we were shown which were the BBC studio, ministers' bedroom and the work shop. At the far end of the lower spine corridor is the second stairway and a narrow passage that leads to a blast door and the gently inclined entrance tunnel into the original Aspidistra bunker. This has been retained as a 2nd emergency exit and is wide enough to take a vehicle. Although we had come down to the third level, the tunnel exits to daylight as the level of the surrounding land had dropped off and the WW2 buildings were built in a hollow to keep them hidden.

We returned to the entrance and made our way along the road to the WW2 complex which first came on line on 8th November 1942. Most of the buildings are derelict and ruinous and will be demolished in Sussex Police's long term plan to develop

the site as a training centre; none of the buildings are listed. The buildings are within a roughly circular complex with each road given a name by the Police. There are a number of substantial brick buildings that housed the transmitters and generators surrounded by various wooden huts including the canteen, architects building (with large windows to admit lots of light) and the coach house where they kept a coach to collect the workers each day from the surrounding villages. There is also a circular brick water tower and a small circular brick pillbox with two loopholes looking down the access road.

There are three large buildings the most impressive is the original short wave transmitter house which is built in typical 1930's art deco style similar to cinemas of the period. The building includes glass bricks, a mirror on top of a column on the curved staircase and upturned lights. Unfortunately the building is very dilapidated and the parquet flooring in the transmitter hall is beginning to lift. As with the aerial allocator building there are a number of glass insulators high in the wall. Although this building is not due for demolition it is proposed to add a second storey.

Adjacent to this building is the later long rectangular transmitter hall where a further three transmitters were located. On first inspection this appears to be painted in camouflage paint but apparently this was done to appease the locals to help the building blend in with the surrounding woodland. The final building in this complex is the vast generator hall with concrete outer walls for blast protection. Although all the generators have gone it still contains all the gantries and hoists for moving heavy machinery around.

This marked the end of our two and a half

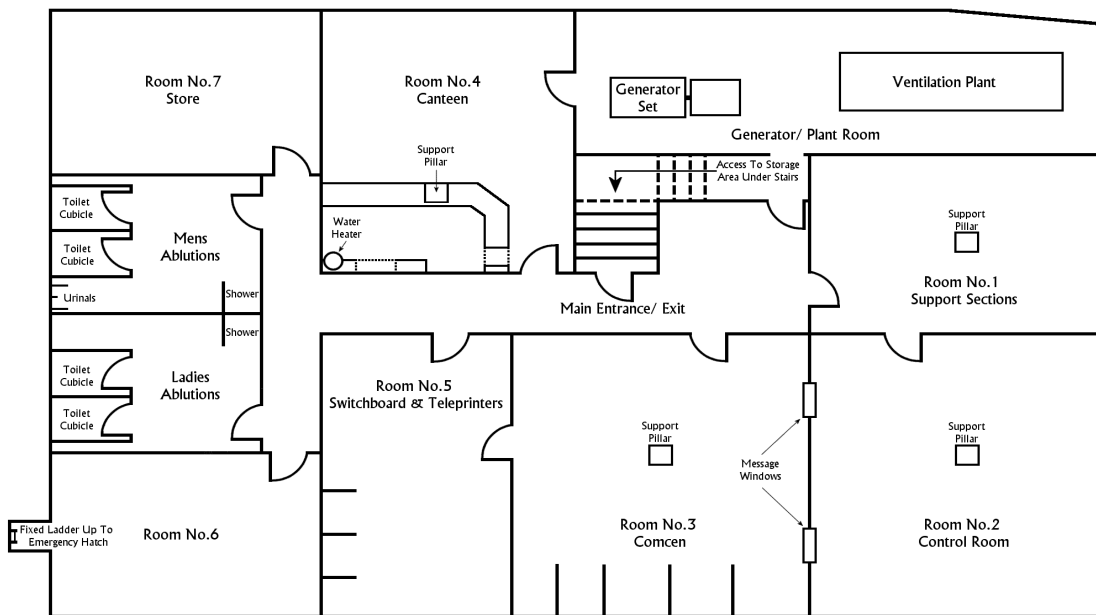
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hour tour of Aspidistra and RGHQ6.1. Those present from Sub Brit were Nick Catford, Andrew Smith, Robin Ware, Richard Challis, Terry White, Keith Ward, Caroline Ford, Bob Jenner and Tony Page. A second trip for 12 more Sub Brit members was arranged for two weeks later and if there is sufficient demand it may be possible to arrange other visits. There were no restrictions on photography anywhere.

Southwark control, designated 51C5 was located beneath a health centre at the junction of Peckham Road and Vestry Road, SE5, almost opposite Southwark Town Hall. After closure, the health centre was demolished in the late 1990's because, according to the Southwark EPO, local children kept breaking in to it. The bunker below remains intact.

The plot of land is now derelict awaiting redevelopment One side of the stairway into the bunker below has been filled with concrete leaving a six foot drop onto the steps. A hinged grille had been fixed over

## Southwark Borough Control 51C5 by Nick Catford



**Southwark Borough Control 51C5**  
Drawing by Alan Lawrence  
© Alan Lawrence 1981

During the cold war London was divided into 4 (later 5) groups, each reporting directly to Kelvedon Hatch, in turn each group was subdivided into the individual boroughs, each of them having its own control centre. The South East Group War HQ at Pear Tree House, SE19 had six sub-controls, Greenwich, Bexley, Bromley, Croydon, Lewisham & Southwark. The

the remaining part of the well and this is kept securely locked.

At the bottom of the stairs is a heavy wooden door giving access to the middle of the long arm of a 'T' shaped corridor. A second wooden door lies on the floor in the corridor, it is unclear where this came

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from, perhaps the top of the stairs. Turning left the corridor opens out into a lobby area.

To the left there is a door with a plastic sign on the door that says 'Generator Room' (All the rooms have plastic signs on the doors). There is a 16 HP two cylinder 3 phase Lister Generator on the left and ventilation and filtration plant and electrical switchgear and control cabinets (made by Melvin Gerin) on the right. The lights on the control cabinets are on. There is a door directly into the canteen but this is locked. Next to the generator room at the end of the long arm of the 'T' is a room with a sign on the door that says 'Room No 1 Support Sections'. There is a central supporting pillar in the middle of the room and various wall maps now badly decayed. There is a large plastic message handling flow chart on the floor. A door leads directly into 'Room No. 2 Control Room' which can also be accessed from the corridor. This has decaying large scale wall maps along two walls, one is labeled 'incident resources' and another labeled 'Incident Map'; this also shows rest centres. There is a large chart labeled 'Board Plott' divided into five columns with the headings 'Time', 'Location', 'Action', 'Resources', 'DEPL' and 'ETR'. There are two windows into the adjacent room labeled 'Incoming messages' and 'outgoing messages'.

This room has 'Room No. 3 Comcen - Communications staff only' on the door. The room has five acoustic booths along one wall with signs above them reading 'SE Group flood net', 'Borough net', 'Raynet', 'Tele. Op. 2' and 'Tele Op. 1'. There is another message handling flow chart and a board labeled 'Communications state'. This is divided into 9 columns with the headings 'UHF Emergency Borough net', 'UHF standby', 'Housing net', 'Raynet', 'VHF', 'FAX 0171 701 7286', 'Phone 1 4660', 'Phone 2 4661',

'Phone 3', 'Teleprinter 1' and 'Teleprinter 2'. There is a supporting pillar in the centre of the room with a sign on it that says 'Filing & Progress Chaser'.

The next room along the long arm of the 'T' is 'Room 5 Switchboard and Teleprinters', this also has a door directly from the Communications Centre. It has an office desk and three acoustic booths. There are various BT junction boxes on the wall and a computer monitor and keyboard and printer on the floor. There is also an 'Autex Telex Manager' on the desk.



The Comcen

On the opposite side of the corridor alongside the entrance stairs is 'Room No. 4 Canteen'. There is a serving counter and various wooden cupboards but all the kitchen appliances have been removed apart from the water heater. There is a locked door into the generator room.

Along the short arm of the 'T' corridor 'Room No. 6' is at one end. There is no other indication of the use of this room although it may well have originally been a dormitory. In later years the dormitories in control centres were often taken out of use and the rooms used for other purposes.



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The room now contains a number of filing cabinets still containing files and numerous papers. There are also several chairs and a low table. At the far side of the room behind a curtain is the emergency escape shaft consisting of a fifteen foot vertical ladder to an ROC style hatch. There is a long framed (and behind glass) 'family tree' style chart on the wall with the heading 'Organisation - London Borough Wartime Headquarters' At the head of the tree is the Borough Controller (Staff Officer Young) and under him the Deputy Controller (J. Parker) and the Assistant Controller Support Services (Cammies) and so on down the line. Next to this room are the male and female toilets with all their fittings intact apart from sinks which have been removed. The toilets flush and the hot air hand driers still work.

The final room at the opposite end of the short arm of the 'T' is the 'Store'. It is fitted with Dexion shelving and has a number of stores still in place including a large battery and charger, various small power supplies, tins of paint, vacuum cleaner various empty equipment boxes and an IBM 72 Golfball typewriter.

Throughout the bunker there is rubbish strewn but surprisingly, considering its location and the fact that it was open for several years, it has not been trashed and vandalised. There is a fairly pungent and unpleasant smell (not toxic) and the atmosphere is muggy and close, this was made worse when the wooden door at the bottom of the stairs was closed. Throughout the wood is painted blue. There are several inches of water on the floor throughout the bunker probably from rain coming through the open surface grille.

### **Uttlesford District Council Emergency Centre (Essex) by Nick Catford**

The Uttlesford District Council Emergency Centre at Saffron Walden in Essex was one of the last local authority bunkers to be built not being completed until 1990. The bunker is located in the basement of the Uttlesford District Council offices which are in the old Saffron Walden Hospital which closed in 1988. A new extension was built to one side of the old hospital building with the bunker taking up a large proportion of the basement. The cost of the bunker was £375,000 of which the council received a 75% grant from the Government. Unlike many other council bunkers, this one remains fully operational with nothing having been stripped out.

Close to the bottom of the stairs down to the basement is a heavy steel and concrete blast door giving access to the bunker. Inside is a small lobby area with two further blast doors and a small decontamination area and a shower. One of these blast doors leads into the standby generator room where the generator is still in place and operational. Unusually a second hand generator from the old hospital, was installed. The room is also used as a workshop and there is a further small blast door in the rear wall leading to a small filter room.

Back at the lobby, the second blast door leads into the heart of the bunker entering what is described on the plan as the 'emergency planning room' but it must have been more of a general congregating room as there is a serving bar and behind it the fully fitted kitchen and food storage area. From this room there is direct access to 5 rooms, the toilet, ventilation plant room, communications centre, operations room and dormitory. The dormitory still

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contains its metal framed bunks and mattresses and at one side is a small tilting bed as found in doctors examination rooms, this was their 'sick bay'. At the back of this room there is another small blast door in the wall giving access to a horizontal concrete tube. This is about 30 feet long bending through 45 degrees into the bottom of a wide vertical shaft with step irons. The emergency exit emerges in the bushes to one side of the building and next to it is the lattice radio mast. The toilet has three cubicles, each with a chemical toilet installed and a washing area. Everything is plumbed in and usable with hand operated pumps. The ventilation plant room is narrow with similar plant and filtration units fitted in most other recent bunkers, again there is a small blast door in the rear walls into a small filter room. The 'L' shaped communications room has numerous radio transceivers installed including those used by Raynet, and along one wall is the SX50 ECN unit.

The largest room in the bunker is the operations room which has a semi circular wall along one side and a central supporting concrete pillar. It is arranged with tables and chairs for the various agency staff, each table with two coloured telephones, one white and one red. There are maps around the curved wall. The controllers room is accessed from the operations room.

This is one of the most complete emergency centres we have visited and credit should be given to the emergency planning officer and his staff who keep it in good order. It is regularly used for exercises and is made available to local school groups and other interested parties. Although the threat of nuclear war has gone, Uttlesford District Council still take emergency planning very seriously with regular local flooding, the M11 motorway and Stanstead Airport within their area of

responsibility.

### Visit to Vange anti aircraft operations



### room by Nick Catford

On the 14th November 1999 7 members of Sub Brit visited the former cold war anti-aircraft operations room at Vange serving the Thames North gun defended area (1 Group 9/11 Brigade). The site is near Basildon in Essex. This was one of many surface blockhouses throughout the country built in the early 1950's to control the 3.7" anti-aircraft guns installed after the war. Like Rotor, most of these blockhouses were obsolete by the early 1960's. Some were converted for other uses but that at Vange was abandoned and was offered back to the local farmer. It lay derelict for many years with many of the remaining artifacts, including the plotting room tables going, on permanent loan to Dover Castle where they form a major part of the displays at Hellfire Corner.

During the 1990's the site was leased to a paint ball company that went bust a couple of years ago, since then the 'bunker' has remained locked and unseen. Unfortunately when we turned up on site the owner had been unable to find the key but a few taps with a cold chisel and hammer soon left the cheap Chinese

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padlock in pieces on the floor. On entering the bunker it was soon obvious that the roof was leaking badly, the atmosphere was warm and humid and there were several inches of water on the floor of the lower level. The power was still connected and when the main switch was thrown the lights, mostly original fittings, came on but after a few minutes we heard several small 'explosions' with sparks flying from fuse boxes which my now were getting very hot. After 45 minutes we decided it would be prudent to dispense with the lights and the power was turned off again.

The paintballers have left their mark in more ways than one, not only have they left the 'bunker' strewn with old tyres and other man made barriers to hide behind but they have also done considerable damage to the internal wooden lining of the ops room and gallery and in places the tiled floors are very slippery from the paint and the smell is rather oppressive. Despite the camouflage netting liberally spread around the ops room its layout is still easily recognisable. The toilets have been refurbished and are still functioning with some of the original fittings still in place. Most other rooms have been completely stripped apart from the ventilation plant room which was locked. After a search we found a rusty key that fitted and were surprised to find everything intact, clean and in good order, even down to the notices on the wall - obviously this room had been out of bounds to the paintballers. The bunker is a mess from top to bottom with most of the damage being done by the paintballers but it is not beyond repair and apart from the roof the building is structurally sound and in fair condition.

Adjacent to the bunker the earlier WW2 AAOR still stands empty amongst a clump of bushes and numerous other buildings still stand around the site including the gun store (with name on the door) now used as

a chicken house, several camp huts and several pill boxes. Unfortunately the main magazine and gun pits have been buried. And the hutted camp, half a mile to the north, was demolished in the late 1990's

A few months later there was a second visit to the bunker to clear the Op's room of rubbish left by the paintballers barricades have all been cleared and stacked in an adjacent room. Tarpaulin and netting stretched across the balcony has also been removed allowing the two level Op's room to be viewed in its entirety. Most of the timber framework on the balcony is still intact although all the Perspex panels have long since gone. In the room behind the Op's room we found several files of papers from its operational days together with several large maps including a civil defence map of the UK. Unfortunately all the papers are very damp and should be removed to dry out.

All the clearance work was carried out with permission of the owners, Marsh Farm who are hoping to lease the building at some time in the future. They are hoping that whoever takes it over will pay for the repairs to the roof.

The owner was visited by government officials in the late 1980's with a view to re-activating the site as a local authority bunker but after the visit heard nothing more from them. The bunker is on private ground and has now been securely re-locked and I'm sure the owner would not welcome unauthorised visitors.

### **3 Group ROC Headquarters at Oxford** **by Nick Catford**

The Watford Group HQ consisted of a semi-sunken protected bunker with a purpose built accommodation block

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alongside and a converted Victorian barrack block. The area was cleared in 1998 and a student accommodation block for Oxford Brooks University has been built on the site. The bunker however is still largely intact, only the surface entrance level consisting of the decontamination area had been removed, the lower floors now lie beneath a grassed courtyard between two student accommodation blocks.

When entering the site, there is an old stone building on the right. This was originally part of a 19th Century barracks built for the Ox and Bucks Light Infantry. It was completely refurbished in the 1980's for use as the UKWMO Headquarters. A purpose built administration block was built alongside facing on to James Wolfe Road. This had offices for the full time staff and a large hall that could be split into two. This was used for teaching and meetings. There was also a large kitchen as the building was intended for use in local emergencies. The original administration building was a large wooden hut in the rear car park. The driving test centre now occupies this site.

In the car park there is a plan of the site with the bunker clearly marked and accessed through an archway between two three story accommodation blocks. An open slope leads down to what would have been the emergency exit, the end of the bunker containing the rear blast door, dog leg corridor and air lock has been removed and there is now a double wooden door with glass panels leading straight into the main spine corridor on the middle level. There is also an open stairway to a new entrance directly into the control room on the bottom level.

Inside the middle level the first two rooms on the right (the male and female

dormitories) have been incorporated into the spine corridor making one long and wide lobby area, beyond this the corridor reverts to its original width, on the right the male and female toilets have been renovated and the officers room has been converted into a disabled toilet. The final room on the right is the ejection room with the pumps still in place and presumably still in use. At this end of the corridor a dogleg originally led to the stairs to the top level. There is now a second pair of wooden doors leading to an open stairway to the grass courtyard above.

On the other side of the corridor opposite the ejection room is the ventilation and filtration plant room with the standby generator room at the rear of it. All the ventilation plant is intact and in good condition. The compressors were replaced in 1990 as the old ones were leaking gas and were worn out. The entire air handling plant was replaced at the same time. All the ventilation ducting throughout the bunker has been replaced with a large air vent emerging into the courtyard. Although the plant is has been renovated it is not used as the students in the buildings above find it too noisy. There are several electrical boxes on the wall that are in use. It is unclear if these are original but the bunker has been completely rewired and fitted with new lighting, together with emergency lighting which is kept on at all times. The standby generator is still in place together with its twin control cabinets.

The next room on the right is the canteen at the end of a short corridor with the small kitchen to one side of the corridor and a serving hatch linking the two. The kitchen has been stripped of all its appliances and the canteen is used as a cutlery and crockery store. At the rear of the canteen a large hole has been knocked in the wall through into the BT room next door with

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another hole in the far wall through onto the balcony around the control room. The BT room is empty but the balcony still retains its original revolving tote boards, unfortunately all but three sides have been painted over. There are doors at each end of the balcony back onto the spine corridor. Between the balcony and the BT room stairs lead down to the control room, which is to the left at the bottom of the stairs with the radio room to the right, this is now used by the maintenance team at the Halls of Residence and has been fitted out as a workshop and store. The control room is completely stripped and the partition wall between it and the communications centre has been removed. A new entrance consisting of two double wooden doors has been inserted on the far side of the control room with open steps up to the surface.

The bunker has been repainted cream throughout leaving only the ceiling of the control room in the original ROC turquoise.

A lot of money has been spent on renovating the bunker but initial plans to use it as a discotheque came to nothing as if it were to have a licensed bar the emergency exits would not be adequate (too narrow). The bunker, which is owned by the student union maybe converted into a games room but at present, apart from the maintenance room it is only used to store crockery and bed clothes. The university now feels that it may have been a mistake to retain it, as it has become something of a white elephant.

When work started on the site much of the original equipment still remained in place including the Perspex map screens still mounted in their wood frames, plotting tables, maps, displays, triangulation nuclear burst tote board and a red wall mounted telephone labeled 'Internal bomb

threat circuit'. All of this was removed by the builders and destroyed apart from the Perspex screens showing the posts and clusters, which are still leaning against a wall in the control room. The university is now considering mounting a display of ROC memorabilia in one of the rooms but unfortunately most of the artifacts have gone.

### **17 Group ROC Headquarters at Watford**



Surface entrance to Watford Group HQ

### **by Nick Catford**

17 Group as it was designated during the war moved into their new purpose built headquarters in 1943 having vacated their former HQ in the GPO buildings in Market Street, Watford. The new centre consisted of a central brick built two storey control room with single storey pre-fabricated blocks around it, similar to WW2 centres at Winchester and Bedford (now demolished). Unlike Winchester and Bedford a brick second storey was added to one of these blocks. In 1953 Watford was redesignated 5 Group with protected accommodation being opened at the rear on the 18th November 1961.

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The Group was disbanded following the 1968 re-organisation with its posts being dispersed to Bedford, Horsham and Oxford Groups. The buildings were retained as a secondary training centre, attached to Metropolitan Headquarters Uxbridge until 1973 and were sold in 1974. For at least the past 15 years the former Group Control has been used by the Park Veterinary Centre who have the WW2 buildings as their surgery, offices and public reception area. The bunker is used for storage, mainly old records, discarded furniture and medical apparatus and empty cardboard boxes. They have also fortified the radio room on the lower floor for use as their drugs store.

Watford is a semi-sunken bunker, painted white (as are all the buildings) with the main entrance into a small blockhouse on top of the mounded middle floor. There are only three rooms on this top level, a filter room and two small decontamination rooms. Beyond these stairs lead down to the middle level with a dog leg into the main spine corridor. On this dog leg is the sewage pump room with the pumps still in place and in good condition in a small sump. The corridor is clear of clutter and much as it was left in operational days with some small hanging pointers indicating the rooms still in place. One says 'GPO Equipment Room' while another points downwards to the 'Ops Room, Ground Floor and Wireless Room'. Moving along the spine corridor the rooms on the left are male and female toilets which are both intact with all their fixtures and fittings.

Beyond these are the officers' rooms and the male and female dormitories. These have been completely stripped and are now used for storage. On the right hand side of the spine corridor the first room is the plant room with ventilation and filtration plant, bank of filters and compressors still intact and in good order. At the far side a door leads into the generator room. The generator has been removed although some of the

control equipment is still in place. The next doorway give access to a short corridor with the kitchen on the right and the canteen straight ahead. The kitchen has been stripped of all appliances and the serving hatch into the canteen has been replaced by a window. The canteen has a number of electrical fuse boxes on one wall. Both rooms are used for storage. The next room on the right is the 'GPO equipment room' which still retains one floor mounted switching rack.

Beyond this is the stairway down to the bottom level and then a doorway onto the balcony. The balcony with its well below is intact and relatively clear of clutter. Beyond the balcony there is a door across the spine corridor, a second door onto the other end of the balcony and a dog leg round the emergency exit. Most centres were modified and a new door installed for the emergency exit, but as this was an early closure the emergency exit consists of a ladder up to a standard ROC hatch. Beyond the hatch is a short stairway and a blast door out onto the end of the mound. On the bottom level there are three rooms, the control room with a window into the



Post war control room

adjacent communications centre and the radio room which, as mentioned, has now been fortified and is used by Park Vets as

## CITY OF SOUTHAMPTON CIVIL DEFENCE 1948 - 1968



**A BRIEF HISTORY** by  
Michael White  
Emergency Planning  
Unit, Southampton City  
Council

The Civil Defence Act 1948 placed new responsibilities upon local authorities to make adequate arrangements for civil defence. The County Borough of Southampton set up a Civil Defence Department, which was originally based in room 106 at the Civic Centre. On the 28th February 1951 the department moved to accommodation at the former Fire Department premises, 15 Hulse Road. The building was refurbished to provide a lecture room and was re-opened on 1 June 1960. The Civil Defence Department ceased operating on 31 October 1968 when its responsibilities for planning were transferred to the Town Clerk's department.

A Home Office Civil Defence circular 3/1952 dealt with the provision of local authority control centres and advised that they be provided on the basis of population numbers as follows:-

Up to 100,000 = 1 Control Centre

Over 100,000 = 1 Control Centre + 1 sub control

250,000 - 300,000 = 1 Control Centre + 2 sub controls

Over 400,000 = 1 Control Centre + 1 sub control for every 100,000 persons

Home Office approval for the building of a control centre was granted on 11 April 1953. The site chosen was on the north of Bassett Green Road just to the west of the junction with The Avenue. No information is available as to why this site was chosen but the fact that it was on the northern edge of the city and thus at the greatest distance from the perceived target of the docks, was no doubt a contributory factor. The centre was handed over by the builders on 5th August 1954 and officially

opened on 7th August 1954 by the Deputy Under Secretary of State at the Home Office, Sir Arthur Hutchinson. As the centre was built on Forestry Commission land an under lease from the Ministry of Agriculture was needed and a 99 year lease was signed on 19th June 1957. The centre comprised a liaison officer's room, senior intelligence officer's room, three operations rooms, three communications rooms, a kitchen and a motor room with all accommodation at ground level. The control centre was retained on a care and maintenance basis as agreed with the Home Office (letter dated 21 August 1968) with responsibility for its upkeep passing to the City Engineer's Department.

By the early to mid 1960's, Home Office advice on the provision of control centres stated that such centres should be located at the local authority's administrative headquarters. This, together with guidance on the suggested number of staff required to operate within centres, meant that the Bassett control centre was inadequate. Planning for the provision of a new control centre was slow with suggestions that a new centre be built under the police station and magistrates court wing, or under the south-east wing of the Civic Centre, or that various basement offices within the Civic Centre be adapted. With the decision to stand-down most elements of civil defence in 1968, it was apparent that the Home Office would not fund the provision of a new centre and so the Bassett control centre remained as Southampton's only local authority control centre.

As will be seen above, by Home Office standards the City needed one sub-control centre. The Civil Defence Committee felt that this was inadequate and had already identified a number of locations on the western side of the city for a sub control (see below). On the eastern side of the City it was decided that a new sub-control would be built on land adjacent the junction of Somerset Avenue and Bitterne

Road. Planning permission was granted on 8th December 1953 and it was officially opened on Thursday 1st September 1955 by Councillor A J Guard, Chairman of the Civil Defence Committee. As with the Bassett control centre, the Bitterne sub-control was retained on a care and maintenance basis with the stand-down of Civil Defence in 1968.



Bitterne - The bunker 'at the bottom of the garden'

For reasons, which are unknown, a western sub-control was never established. A number of locations for such a centre had been identified including:-

- Oatlands House, Winchester Road, Shirley
- Day Nursery, Tremona Road
- Freemantle Common
- Day Nursery, junction Northlands Road and The Avenue
- Shirley Recreation Ground (west-side)

A training rescue ground was established at the Corporation Yard, Kent Road, Portsmouth. This replaced a previous facility in war damaged properties in Blechynden Terrace, adjacent to the railway station. Stores of civil defence equipment were held at the former Ambulance Station in West Quay Road and the former Police Station, Paynes Road, Shirley.

There were a number of wartime ARP (air raid precaution) posts which, upon Home Office advice, were retained as sector posts. These were located at:-

- Merry Oak Green
- Furzedown Road, Highfield
- Shirley Recreation Ground
- Golf Course Road
- 14 Queen's Park
- Deepdene (where there were also 2 public shelters)
- Junction of Castle Road and Dell Road
- Waterworks site, Butterfield Road
- Junction of Thornhill Park Road and Upper Deacon Road (where there were also 3 public shelters)
- Northam School, Kent Street
- 3 Stoneham Lane
- Path from Brookvale Road to Orchards Way

The Bassett Control bunker is located on the northern edge of the city in Bassett Green Road adjacent to the M27. The building was subsequently leased to a gun club and used as a rifle range. The City Council has now assigned the lease to another party and in June 1999 the building appeared unused.



Bitterne - The operations room showing map, resources board and the emergency exit on the



## EAST GERMANY AND BACK 2001

By Paul Sowan

This visit, (29th April 20 to 6th May 2001) for members of Subterranea Britannica, was organised by SB member Mike Barton, whose career has been in the Army / SAS and appears to have included signals and intelligence work, and interpretation and translation to and from German and Russian

### **Körbelitz STASI bunker**

Our first visit was to one of the 15 main STASI (East German Secret Police) regional bunkers, for the Magdeburg region. All such bunkers were built in secrecy, in out-of-the-way places, and generally constructed to give an impression of anything but the sinister reality! Körbelitz was designed to look like any other innocuous country house in a clearing in the forest! The former East German state had at least 650 major underground bunkers ... for the STASI, the civil police, the Communist Party, the NVA (Army), the Russians, etc etc. Generally, one lot of bunker-inhabitants was not to know about all the other folks' bunkers! And they spied on each other!

The Körbelitz bunker is reached from a minor road between the villages of Körbelitz and Wormlitz, about 14 km to the north east of Magdeburg. On the north side of the road an anonymous track leads through the forest to a gateway (with a not immediately conspicuous pillbox guarding it) and a clearing in the forest laid out as a garden, with a large lawn. This is now in private ownership, and the current owner showed us round. The original house is, on closer inspection, of distinctly functional and military design, and of sturdy concrete construction. It is now derelict, and the owner has built himself a more comfortable modern house alongside. Diagonally across the lawn from the new house is a series of sheds, one of which contains a flight of steps down to the bunker. The bunker had been constructed, we were told, only at night, as a security measure.

On the north side of the lawn, hidden in shrubs and trees, is a summer house and a proliferation of less common garden features, including two sliding steel covers for two further flights of steps down, various air intakes and diesel exhaust pipes, and circular man-hole covers over emergency escape shafts.

Around the site perimeter, decently hidden in the forest, are more pillboxes, the remains of an electric fence, traces of dog runs, concrete dog-kennels, and power cable intake points.

As we entered the first of many bunkers, we were shown cases of brand new Russian gas masks ... the owner insisted we all took one home as a souvenir as we left. So I now own a Russian gas mask, complete with instructions booklet!

The main external doors are massive, blast-proof, and allegedly also proof against radiation, and biological and chemical warfare agents. Some are automatic and motorised. Even some minor internal doors are almost as heavy. When the STASI capitulated, in the run up to re-unification, they simply melted away! Locals discovered the bunker, and most of the contents were stripped out or smashed. But we were able to see plenty of evidence for ventilation plant complete with Russian air filters, electricity supplies, water supplies, domestic arrangements, and most importantly telephone tapping equipment. Apart from keeping tabs on telephone calls (all could be recorded) made by the local population (those few who actually had telephones, anyway) this bunker had taps on the main communications cables alongside the nearby autobahn linking West Germany to West Berlin. Most western signals were of course encrypted, and I am not sure to what extent the STASI were able to decipher them. There was an inner secure 'crypto' room.

It seems this bunker, in time of war, might have accommodated some 40 persons sealed-in with supplies for several weeks. What the inmates were to do, in the event of the nuclear war the bunker was designed to withstand, when the supplies ran out was not clear!

Like many other bunkers we were to visit, this one was a 'cut-and-cover' construction in the sands and gravels of the North German Plain. The underlying bed here is clay, at a depth of about seven metres.

### **Altengrabow Russian military signals bunker, barracks, and ammunition stores**

Altengrabow lies at the northern end of a very large military training area (at least in part now used by the Bundeswehr) shown as such on the current public maps, about 33 km south-west of Brandenburg. We approached via Drewitz, where a rail siding for military supplies terminates, and Dornitz. There were no manned military check points en route to the former Russian sites. These constitute a sizeable self-contained township with barracks, blocks of flats, social centres, shops, and even a district heating plant (looking like a small power station) all abandoned and looking quite attractive amongst silver birch trees. Driving further into the site, we came to an equally abandoned inner security area and checkpoint, now well into the forest (I heard my first cuckoo of the new millennium here!) Then, there was the bunker, built in the 1960s /1970s. A rectangular grassy mound which, but for the large number of sinister things sticking out of it, might well have been nothing but a covered water supply reservoir.

On the surface, painted in a sort of 'Southern Electric' green, were antennae, air intakes, diesel exhausts, a small sewage plant, emergency exit hatches, and so forth. Two main entrances, wide open, lead down narrow flights of steps into a main entrance corridor with, halfway along, a very heavy steel door, painted

yellow and with Russian lettering on it, off its hinges and propped up against the wall.

A very noticeable feature of this and other Russian bunkers was the liberal use of brightly contrasting paints (mostly yellow, green, red, and blue) for doors and plant. To some extent at least this was probably a colour-coding system. I suppose we had half expected everything to be in drab shades of concrete-grey! Much of the plant is still in place, although most of the electronic equipment has been removed.

It seemed that this place did not require a large staff, as there was little evidence of canteen or dormitory provision, and there were only two loos. The primary purpose of the structure appeared to have been communications relay work.

One room contains six curious vertical cast iron structures with ? restraining steel cables for unknown equipment no longer in place ... nobody had any convincing suggestions what this might have been for.

Nearby (on the surface) a small green 'Wendy house' sort of building in the forest turned out on closer inspection to be made of iron, with what might well have been bullet-holes in it, and a shaft inside leading down to a small cable-junction room, full of terminals lettered in Russian characters. Not far away, in contrast with all the high-tech stuff, is a very primitive earthen pillbox!

After a picnic lunch (distinctly similar to breakfast, and last-night's supper, but more than welcome, as was a bottle or two of beer) we went on to look at the barracks, and the district heating plant, which although a little vandalised is substantially complete. When the Russians went, they simply walked out, taking with them only the most important documentation, electronic equipment, and armaments. There was even a small abandoned Russian train, which had been

used as a 'fire engine' in the ammunition stores area ... it has a water cannon mounted on the front of the loco.

Nearby was a shell-filling installation with a small district-heating plant nearby. Puzzlingly, the ammunition was stored in warm conditions, at a minimum of c. 25°C (surprising, as nitro-explosives deteriorate in storage unless kept cold I thought.) Prisoner-of-War labour was used here in WWII to attempt to avoid allied bombing, and the facilities were also subsequently used by the Russians 1945 - 94. In the former NAZI PoW dining hall, a swastika on the wall had been painted out but was still eerily visible, but the slogan ARBEIT ADEL (work ennobles), which the Russians evidently found to their taste, was retained!

We finally looked at various surface ammunition storage bunkers ... mostly / entirely of concrete construction, mostly earthed-over. Nearby (not accessible) we saw former storage buildings for eight SS20, SS22 and SS24 missiles.

Particularly unpleasant, in a place already nasty enough, was a Russian military prison, . . . There is a wire netting-covered (and tiny) exercise yard. The cells have iron doors, no windows or lighting, and bowls fixed into the concrete floors for the prisoners' meals. It seems they were expected to eat like dogs.

### **Geltow / Wildpark**

We were welcomed to a secure, guarded Bundeswehr area at Geltow (about 6 km south-west of Potsdam), and ushered into an active signals centre, or Fernmeldesystemzentrum, with instructions not to photograph anything unless given specific permission. This is one of five such interlinked centres in modern Germany, built c. 1980 - 85 to replace the older bunker ('Goring's bunker') nearby. An officer explained the functions of the old World War II bunker,

and of the modern bunker where we were now assembled. The older structure, supposedly Hermann Goring's bunker, was now surplus to requirements and was about to be stripped out and permanently sealed (too much Army time is taken up showing visitors around it, so we were one of the last groups to see it.)

We were shown around the 'top secret' parts of the modern bunker, the most important room being just a small space with a few computers and printers and telephones and their operators - possibly an illicit photograph of this rather boring room might have meant something to somebody! More photogenic, where photography was allowed, was the control room for the bunker services (air, water, electricity and so forth), and the associated plant room.

The old and new bunkers had previously been linked by a tunnel, but this is now sealed. 'Goring's bunker' was built in 1936 - 40 or 42. It was used by the Russians (Potsdam fell within the old East Germany) 1945 - 56, and by the East German Army 1956 onwards, re-equipped in 1962, and has been in the hands of the Bundeswehr since 1992. At one time, during World War II, the (occupied) coffins of several German dignitaries were stored in a room in this bunker (they have now been returned to more appropriate cathedrals or other locations!)

As everything here was about to be scrapped, we were invited to help ourselves to any souvenirs we might like to take home! Several members of the party thus went home with yellow free-standing air-conditioning units originally designed for use in Russian submarines! Apparently these are not simple de-humidifiers, but also absorb carbon dioxide, and return oxygen to the air - chemically quite clever. The more chemically-minded of the party debated how they might work, without reaching any clear conclusions.

The bunker is a very large cut-and-cover structure, inside a small hill (but our Army guide did not know any local geological details.) There is a soil cover up to 25m thick. 160 men could be sealed in and accommodated for up to three months. However, if the Cold War had turned 'hot' the facility would have been required to function for just 20 minutes and then closed down.

In addition to all the usual plant and communications equipment, we were shown a wooden telephone box which housed (during the communist era) a 'hot line' to Moscow.

In the grounds outside we saw a gamma-ray and blast detector unit which would automatically close the bunker external doors in the event of a nuclear explosion. Thus sealing inside or outside whoever happened to be inside or outside at the time. I would not fancy the fate of anybody halfway through the door at the critical moment. There were also buried wires to detect the nuclear warfare electro-magnetic pulse. There were problems with magnetic storms triggering the automatic doors at inappropriate moments! Also nearby we were shown where Goring's train was allegedly stabled, and photographed one of at least two 'sugar-loaf' shaped air-raid shelters in the grounds.

#### **Strausberg NVA communications / command bunker complex**

Strausberg is a town c. 170 km east of Berlin. There are two inter-linked bunkers with a tunnel connection also to the basement of a multi-storey building (? still in military use) inside a still-active military area (there is a small active airfield nearby.) One bunker lies below the large car park, the other is hardly subsurface, but under a grassy earthed-over concrete structure. Here again the contents of the structure are being scrapped, and again we were invited to help ourselves to souvenirs! I restricted myself to a 'security area - keep out' notice in German, to ornament the loo at home. We were shown

round by Col. Kampe, the former NVA commander at this site!

The main bunker is about 30m x 70m, on two floors, and was linked to a remote transmitter station at Kargel It is built in two weakly-linked halves, to provide for possible dislocation as a result of a nuclear weapon burst.

Features noted inside included pneumatic message apparatus (like that used in the old department stores in the 1950s), NBC (nuclear / biological / chemical warfare) air-filtering, and smart carpet (the bunker went on-line in the 1980s and was a much-visited model for other Warsaw Pact military administrations.) There were separate, secure (and better furnished and decorated) STASI rooms, to which Col. Kampe had had no access when he was in command here! These had direct lines to Moscow.

A long tunnel (passing machine rooms on the right) leads to the second, operations / command bunker. This had a command centre desk with telephones and sliding map panels. The Strausberg bunker is unusual amongst those we saw in that it was not in the depths of the country, and was on the site of a publicly known East German Army site.

#### **Garzau NVA computer development bunker**

Garzau is a small place about 6 km south-east of Strausberg, and was a very important computer development centre. It is now in private ownership, and operating as a museum. Much or most of the equipment is still in place and working. Associated surface buildings still stand, with an impressively long tunnel link from the basement to the bunker below a nearby hill.

Software was developed in the surface buildings. Electronic equipment was protected in a controlled environment in

the bunker. There are two floors. The bunker was fully-manned and operated day and night. It was built to withstand a direct hit from a nuclear bomb, and a displacement of 0.4 m laterally and / or vertically was allowed for in the event of such an attack. The bunker is cut-and-cover, with layers of earth / concrete slabs forming an umbrella above the structure, and a further layer between floors, to absorb blast. The bunker is in a hill to the rear of the surface buildings. Many / most internal floors are mounted on shock-absorbing springs.

The access tunnel from the surface building basement (about 200m) leads into the lower floor of the 45m x 50 m bunker. Each floor has a ring corridor, with central rooms with shock-absorbing sprung floors. The entire structure was built inside a 'Faraday cage' to protect the electronic computing equipment from outside interference. This is an exceptionally strongly protected structure. The plant is all in working order. A positive over-pressure is maintained inside the bunker, to exclude dust, radioactive fallout particles, or biological or chemical warfare agents. There is an independent internal 80m well and water supply and pump. The structure was built about 1972 - 75, and operational from 1976 onwards.

There is an emergency exit from the upper floor, and an adjoining vertical shaft for heavy plant (the hoisting mechanism remains in place.)

This bunker could operate in self-contained mode for 24 hours, before a decision had to be taken whether or not to continue in totally sealed mode (for 14 days.) As a result of the very high power consumption by the computer equipment, no internal heating was required. Diesel generators used external air, so were sealed off from the bunker interior and remotely operated. Of the four diesel generators, three were needed in action at any one time.

The original DDR computers were removed, but have been reinstalled. An early 1960s analogue computer was demonstrated, working! This bunker is now operated as a museum. The private owner or occupier here does not allow photography, and has a side-line selling redundant NVA uniforms and other items! I was not tempted by surplus military bits and pieces!

As in Poland and Ukraine, there is a great deal of mistletoe in the trees in eastern Germany. Was it the climate or was it communism that it liked? I can't recall seeing mistletoe at all during a week in the Czech Republic however.

### **Harnekop NVA command bunker**

Harnekop is about 14 km north-north-east of Strausberg, and was a very closely guarded secret. It is, again, in private ownership. The site is permanently manned, charges are made for entry, and no photography is allowed. The bunker is hidden deep in the forest to the west of the village ... one of the several concentric ring-fences was an electric fence at 2,000 to 10,000 volts!

This bunker was built 'cut-and-cover' in 1971 - 76, and is about 40m x 60m, on three floors. Groundwater is at 30 - 40m depth, and there is an internal well and water supply. The structure was built in great secrecy. A 'decoy' hole was excavated elsewhere, and the real hole excavated at night under cover of camouflaged tarpaulins. Workmen were employed only for short periods, then replaced, so none knew the full extent or nature of the construction. Excavated spoil was sprayed with liquid manure to disguise it. A nearby multi-story building was erected to give an impression that this was only a signals bunker. The entrance is inside the office block.

Visiting officers from Strausberg were driven at night in buses with blinds down, and via a long and tortuous route for the

16km from Strausberg the roundabout journey taking two hours. NVA staff here wore DDR post office uniforms for secrecy.

The structure has sprung floors almost throughout, is inside a Faraday cage, and has external walls 3m thick, and internal walls 1m thick. Like Garzau it is very heavily protected against nuclear weapons attack, with allowance for a 0.4m lateral and / or vertical displacement in the event of a nuclear strike. A 'Hiroshima' type bomb would have shifted the structure 16mm! The air intake, hidden in surface sheds, could have been cooled from 1,200ø C!. Further protection was provided by metallic alloy strip seals in the blast-proof doors, intended to prevent them being welded shut by an atomic fireball. Whether anybody inside the bunker in such an event would ever want to come out again is an interesting question! A helicopter could be landed on the flat roof

There were to have been (in action) 450 personnel ... 200 officers and 250 technical / domestic staff This bunker could have operated in sealed mode for 25 days, and has four dining rooms and beds for 160 persons (the 'hot bed' (taking turns in bed) system would have been used for all but the very top brass.) We had a look at Erich Honnecker's bedroom.

The NBC air-locks / decontamination rooms could be monitored by CCTV, and routes for incoming personnel are indicated on the floor (white route 'normal' or red route for 'decontamination.' Persons unacceptably ill or irradiated would be denied entry, or if already inside would be shoved outside, in the event of serious hostilities. There were timetabled air-lock times to maintain an internal overpressure.

As at Geltow, blast, gamma-ray and EMP detectors outside could have closed all external doors automatically in the event of a nearby nuclear explosion. Each door has

its own electric motor to open or close it.

Transmitting equipment would normally transmit via remote transmitters at Kunedorf about 12 km away, so as not to give away the bunker's position to persons monitoring the radio frequencies, but it could if required transmit directly up to 200 km from antennae buried 0.8 m depth in the ground around the structure. It was possible, also, to broadcast via DDR radio or television networks. Accumulators could power the plant for 24 hours

A main-frame computer, made in Jena, was exported to Russia, then immediately brought back to Harnekop in secrecy. All the original equipment remains in place. Electricity consumption was such that the interior could not be kept below 25ø C ... no other heating was required, beyond the heat generated by the computers and other equipment.

There is a 60m well in the lowest floor, although the water is iron-contaminated. All waste water was cooled before being pumped out of the bunker, to protect against it being detected by thermal imaging. Diesel generators could be in operation within 20 seconds in the event of an external power supply failure. There was massive air-cooling plant to keep the computers cool, and there are 10 huge compressed air tanks.

A pneumatic tube internal communications system was provided, as well as closed-circuit television. A map room is equipped with a camera / CCTV so that maps could be consulted from various points inside the huge structure. There was accommodation for five or six Russian 'advisers!' Nicely wood-panelled rooms were provided for Ministers.

This structure was in use by the NVA until 1990, then by the Bundeswehr until it was declared surplus to requirements in 1993. The nearby railway is now closed.

### **Falkenhagen chemical warfare factory etc -**

Falkenhagen is about 17 km north-west of Frankfurt / Oder (on the Polish border.) There is an extremely large bunker north / east of the village, constructed commenced from 1938 onwards. The area was 'closed' during the period 1938 - 45, and the castle at Falkenhagen demolished to make way for the new works. The site was rail-linked, at first by a narrow gauge line, but later by standard gauge. Ultimately, standard gauge track ran right into and through the topmost floor of the four-storey bunker, the tunnel entrances being disguised by camouflaged corrugated iron sheds. The internal railway tunnel is about 180 metres long.

The site has had a range of uses under Nazi, East German, and Russian command, and the interior of the bunker has been much modified since 1938. The same is true of the extensive surface buildings. There is now virtually no equipment of any kind left above or below ground. NBC-proof doors and decontamination rooms and the like are now built into parts of the internal rail tunnel.

An extension from the main bunker appears to have been used for the storage of chlorine tri-fluoride  $\text{ClF}_3$  (gas), an exceptionally unpleasant compound which was manufactured from here from 1938 and during WWII in surface plant ... presumably the gas was stored under pressure in liquid form (the liquid boils at about  $+12^\circ\text{C}$  at normal air pressure.)

#### *Description of chlorine tri-fluoride*

This quite exceptionally dangerous compound was discovered by Ruff and Krug in 1930, originally as an impurity in the mono-fluoride. This compound is remarkable for the extraordinary vigour with which it reacts, which is even greater perhaps than fluorine itself. It destroys glass and quartz except at low

temperatures; glass wool catches fire in the vapour immediately. Organic substances react at once with inflammation; one drop of the liquid sets fire to paper, cloth, or wood. Most elements are attacked explosively, and if not they can be lighted by a fragment of charcoal; many oxides behave in the same way. Liquid  $\text{ClF}_3$  reacts with water with a noise like the crack of a whip; if water is allowed to enter the flask which contains the gas some of it is thrown out by the violence of the reaction. *Information from N V. Sidgwick (1950), The chemical elements and their compounds IL page 1156.*

What the Germans proposed to do with this extraordinary material is far from clear. Fluorine for the manufacturing process was generated on-site by electrolysis of a molten metallic fluoride (perhaps potassium fluoride  $\text{KF}$ ?), derived from the common mineral fluorspar ( $\text{CaF}_2$ ) imported from Bavaria.

The storage area was on the lowest floor of the bunker extension, in 64 small rooms (four lines of 16) ... we were told the containers (full) weighed 2.5 tonnes, containing 1 tonne of chlorine tri-fluoride each ... and that there was provision for 'drowning' the facility in massive volumes of water in the event of problems (? perhaps explosive instability) ... there are (surprisingly) small apertures at one edge of the ceiling in each room to provide for water entry / fumes escape ... presumably the rooms have not been modified since first built ... they have normal width doors (with provision for pressure-tight seals.) At a higher level, above the storage chambers, pressure relief valves remain. On the ground surface above there is a high-capacity water tower, and one or two fumes escape shafts. I saw no evidence of explosion or corrosion damage to the building fabric, so presumably the chlorine tri-fluoride remained under full control at all times.

An overhead 'monorail' system was used for moving the containers around on the lowest floor.

I would expect the violently explosive reaction with water to yield an extremely hot mixture of oxygen, possibly free chlorine and / or fluorine, and hydrogen chloride and hydrogen fluoride gases. The oxygen and free halogens would all support violently exothermic combustion, and the halogens and their hydrides are exceptionally corrosive, and form exceptionally corrosive acidic solutions in water (HF dissolves glass and other silicate-based materials such as concrete.)

There were altogether five surface chemical plants at this site, although we did not visit any other than 'domestic' surface buildings. The world's first industrial-scale fluorine production commenced here (we were told), and all data went to the USA at the end of World War II (along with von Braun?) and from under the Russian liberators' noses? Quite how the Americans got all this from the Russian-occupied zone was not made clear - perhaps via Bavaria (see above.). Other factories at surface made the nerve gas Tabun (from 1938), Sarin ('six times more effective', from 1944), etc. The Sarin factory was about 70 - 80% completed when the Russians arrived.

Grinding mills (to process fluorite raw materials) were in buildings later used by the Russians for saunas and showers. The chlorine tri-fluoride plant occupied four surface buildings fluoride, electrolysis of molten potassium fluoride (to make fluorine), electrolysis of brine to make chlorine, reaction of chlorine and fluorine, and condensing and purification and liquefaction under pressure of chlorine tri-fluoride.

There was a manufacturing capacity of (?) 500 tonnes per month ... of which product I am not sure. All thoroughly unpleasant.

The establishment was known, in WWII, as 'Institute East.' The chlorine tri-fluoride was codenamed N-stoff? N might have been misconstrued as 'nitrogen' (most synthetic agricultural fertilisers and most explosives are nitrogen compounds. Nitrogen in German is stickstoff although the Germans use the internationally recognised symbol N for the element. The 'N' in N-stoff might have been to indicate 'nerv' or 'nerven' (German, nerve - ) or might just have been a random or a deliberately misleading code.

Everything of importance was removed to Bavaria as the Russians advanced in this area . . . The main bunker is on four floors. The Russians arrived here in April 1943 (the Germans had abandoned the bunker in February 1943.) It was used February - April 1945 as a Russian hospital, but for some years it lay abandoned.

The Russians subsequently created the standard gauge rail tunnel into the bunker, which in the Cold War was intended to be used as a command post for the Berlin area. The NBC proof main door weighs seven tonnes, the bunker has over 400 rooms, and we were told 'it is very easy to get lost!' Personnel would perhaps have numbered 350 - 400 men? Cables reached the bunker via the Baltic seabed (bypassing Poland), but all Russian cables have been cut, and none of them appear in East German records!

The Russian officers' rooms had wallpaper! The bunker is stripped of all equipment, the Russians taking from November 1990 to October 1992 to remove everything. The third-level extension (westwards) was built by the Germans and is 60 m long, the upper levels being subsequently used by the Russians as dormitories ... there were 64 'bedrooms' (corresponding with the storage chambers in the lowest level.)

There is a large abandoned power station



(not examined) on the surface, but the six diesel generators have been removed, and the Russians used this space as a gymnasium. Amongst the surface buildings are barrack blocks (mural decorations in domestic rooms), a social centre (with a mural perhaps depicting Red Square in Moscow), etc. The bathroom and bedroom wall decorations are rather cute, Walt Disney style!

Characteristic Russian brickwork is very prominent (and was also seen at Altengrabow) - white bricks, with 'far too many' long vertical joints! It looks, mechanically, far from sound, but I was unable to find out the internal structure of such walls.

I have, but haven't yet had translated, Heini Hofmann's booklet 'Militarische Geheimnisse 1938 - 1992: Das "Seewerk" Bunker im Wald von Falkenhagen' which will no doubt answer some of the unresolved questions noted above ... when I get it translated! The title appears to mean 'Military secrets ... The bunker by the lake. I have just had from Tony Page his translation of the above, which seems to confirm that chlorine tri-fluoride was intended to be used as an incendiary agent ... as C1F3 is itself a violently powerful oxidising agent and as so many chlorides and fluorides of non-metallic elements and semi-metals broadly defined are volatile liquids if not gases, this would certainly have been a more effective incendiary agent than the magnesium and phosphorus that were, severally, actually used in WWII incendiary bombs, both of which required atmospheric oxygen to burn themselves or to ignite other materials that would ordinarily burn in air. Chlorine tri-fluoride would initiate and support the combustion of almost all 'normal' materials, and as the reactions are strongly exothermic and so many of the combustion products (chlorides and fluorides) highly corrosive gases at elevated temperature the interactions would also be potentially violently

explosive. Magnesium and phosphorus incendiaries could be damped down or put out with sand if not water.

### **Zossen-Wunsdorf**

The two adjoining villages of Zossen and Wunsdorf about 33 - 40 km S of Berlin, and the north-south road linking them, were enclosed within a secure military area during WWII. The installations (from WWII and the Russians) are described and illustrated in some detail in an English-language booklet stocked (ii 7.95) by the Ian Allan Bookshop, 45/6 Lower Marsh, LONDON SE1 7RG ((t) 020-7401-2100)

Hans George KAMPE, 1996, The underground military command bunkers of Zossen, Germany. History of their construction and use by the Wehrmacht and Soviet Army 1937 - 1994. 4.8pp. Published by Schiffer Military / Aviation History, Atglen, PA, USA. [ISBN 0-7643-0164-0] The expected guide did not arrive at this site, and we were unable to see the interiors of the bunkers. However we were able to see the massive concrete interiors (now wrecked by deliberate dynamiting) of the 'fake' cottages built to hide bunker entrances, and some members were able to explore to a small extent below the wreckage.

Two large main bunkers were known as Maybach I and Maybach II - they were linked by a long tunnel. Some of the wrecked 'houses' each covered smaller bunkers? The bunker areas are sealed off behind locked gates and wire fences, but there are well-established holes in the latter! The area is now being developed for private housing.

### **Stoizenhain Russian nuclear warhead store -**

Stoizenhain is an obscure and small village on the main road southwards from Juterbog, about 18 km south of the town. The bunker and associated surface buildings are hidden in forest on the east side of the road, about 3 km north of the

village. The bunker was for the storage of Russian nuclear warheads for Scud B, S52 I, and SS23 missiles. Another such store, to the north, has been totally destroyed (?) NVA warheads were also kept here, but NVA personnel were not allowed access. Launch sites were elsewhere (not seen.)

A forest track leads off from the road, passing a guardhouse and flanked by gate pillars with Russian lettering (post and gates are not visible from the road.) I understand the wording is suitably heroic - patriotic - socialist but gives no clue to what was beyond. Beyond this the forest track leads into an area of barracks (characteristic Russian white brick / yellow paint) and another gate, beyond which are more barracks, a district heating plant (prominent chimney), social centre (impressive Russian mural decorations inside and out) and gymnasium (more murals inside.)

The gymnasium murals include Soviet badges and a male and female athlete. What appears to have been the social centre has a 'Moscow' or 'Red Square' sort of coloured mural on an outside wall; depictions of 'war' and 'peace' either side of the entrance porch (doves, guns, etc); and large and impressive armed forces' emblems on the interior walls.

A further guard post and gate (with a vicious electric fence) guards the innermost (forested) area. The main gate into the innermost security area would only have been opened for the delivery or removal of warheads. There is a tunnel under the electric fence for day-to-day personnel movements, from the basement of one of the buildings to the forest inside the wires. Leading off from the pedestrian tunnel are several very small rooms - presumably guard points. The tunnel itself has decorative wall

panels.

The underground warheads storage bunkers (there are two) are normally sealed. On this occasion the owner had used an oxy-acetylene torch to cut open one of the two massive doors to one of the two bunkers, and laid in electric lighting for us. Doors were to be resealed after our visit. The whole area is currently in private ownership, and used for the manufacture of wood-chip based compost (a peat substitute?)

We visited the west bunker, entering by its north door (which is about 0.5 m thick!) The N and S entrances and associated lorry bays were hidden from aerial observation by ramshackle wooden sheds ... perhaps the Russians even had the odd cow wandering about to complete the deception! Each entrance leads onto a 'balcony' from whence the warheads could be taken by an overhead travelling hoist and lowered to the floor of the central hall. Leading off the hall are four large, long rooms where the warheads appear to have been fixed to the floor by steel clamps, some of which survive.. There was room (in the entire complex of two bunkers at Stolzenhain?) for 120 to 200 warheads. These were sealed in aluminium containers with an internal overpressure to detect tampering / exclude dust etc. Each of the five USSR armies had such a



missiles brigade and store.

Control panels on the E wall of the central hall had labels - indicating air helium and vacuum in Russian Also noted were brown-coded gas cylinders. The site was built for the Russians by the NVA ... but the East Germans were never told what it was for, or allowed into the completed facility. Surface buildings are dated 1971, 1975, and 1987. There are assorted pillboxes in the forest surrounding the storage bunkers.

This site was vacated by the Russians (along with documentation and the warheads!) before any of the re-unification agreements were signed, so no accessible records survive in Germany.

There are monitoring devices in the storage rooms (on the west side of the central hall.) Other rooms contain brightly painted instrumentation, ventilation and other plant etc ... also a 'glove box' for handling toxic or ? radioactive material. Curiously, the only provision for personnel to reach the central hall floor from the balconies is via vertical steel ladders.

### **Söllichau Warsaw Pact six-bunker complex**

Söllichau is a very large site hidden a long way down a narrow, twisting road which branches off north-eastwards from the main road on the east side of Sollichau railway station (still in use.) It is about 9 km. north-east of Bad Duben.

All the bunkers are relatively small, but dispersed for safety - four staff bunkers, a main command bunker, and a communications bunker. There are no tunnel interconnections between the bunkers. We saw the latter two. A nearby munitions plant was maintained as 'cover' for the bunkers. The site is covered in beech and pine forest. Our first (command) bunker was on two floors, built in 1969 by the NVA, and includes an army commanders' operations room. We were shown a red telephone for a hot line to

Berlin and Moscow. We saw a map room, CCTV (in use from 1979), air and water processing plants ... all in working order. The bunker construction was inverted U-shaped concrete arches, earthed over. There is 1 Om of earth above each bunker. One bunker has a main frame computer, another a hospital. Also a technical and supply bunker, servicing the others. Much computer equipment, military stores and vehicles were seen. There are camouflaged concrete roads. A signals-switching bunker has lead / copper nitrogen-filled cables. This complex was completed in 1979, and used by the Bundeswehr 1990 - 93. The cost of construction of something like 100 such sites (of a total in former East Germany of about 650!) led to the economic collapse of the country!

### **Machem STASI bunker for the Leipzig region -**

Machem is very similar to Korbelitz, but fully equipped. It is now operated as a public museum, about 17 km east of Leipzig. The STASI HQ in the city is now a public museum also. The east German revolt against communism originated largely in Leipzig.

The 'cover story' for this bunker was that it was holiday chalets for waterworks employees! There were already genuine chalets nearby (and still are), and additional ones, including fakes, were built. The bunker had been stripped out, but has been reequipped. It is a 5.2 hectare site, the bunker built entirely by the STASI ... local officials / police were not allowed knowledge of it. There were 2,400 STASI personnel in Leipzig. When a 30,000 - strong anti-communist demonstration was expected, STASI and police were assembled to cope with that number ... but in the event 75,000 demonstrators turned up ... the Leipzig city HQ was seized ... and the Machem bunker was abandoned and subsequently discovered. Whereas at Sollichau and Strausberg we had been shewn around by former NVA personnel, at Machem we were welcomed by a young couple who had themselves been a part of

the 'revolution' against East German communism. Their account of events leading up to the reunification of Germany was refreshing to hear!

The bunker diesel exhaust was positioned beside a chalet chimney to deceive thermal imaging! Entrances (two, with sliding horizontal steel panels as at Korbeltz) are inside a surface building. A receiving radio antenna looked 'like a tree' and was hard to spot amongst genuine trees, and artfully positioned screens blocked views of important parts of the site (such as air intakes / Diesel exhausts.) There were boundary dog runs, a fire engine was kept on site (and is still there), and construction materials were stockpiled off site, and brought onto the site via a rear entrance, not along the road passing the established holiday homes. There was a remote transmitting aerial, and full NBC protection. The bunker was built in 1969 - 72 (so it was one of the first to be built, thus differing somewhat from Korbeltz.) The STASI were established c. 1953 following an anti-Russian uprising in East Berlin ... which was put down by tanks and troops ... It was said the STASI should have known about and prevented this ... thus a system (approximately an equivalent of our MIS / M16) was set up to control the whole DDR divided into 15 regions, each with a bunker such as this ... sub-districts also had bunkers! Police, the Communist Party, and the Army also all had bunkers! The STASI 'had the best bunkers.' Communist Party bunkers had very poor protection! They were planning the 'liberation' of West Germany! There would have been 'camps' for the imprisonment of foreigners and 'undesirables.' Most documentation has been destroyed, and few ex-STASI personnel have ever been charged or convicted of offences ... too little evidence, and too costly in legal proceedings? In the event of war there would have been three KGB 'advisers' at Machem, although in fact no Russians were ever on this site.

In the event of war it was assumed Leipzig (25 km distant) would have been lost as a result of nuclear attack ... the Machem bunker might have continued active for six days (it was assumed the war would last three days!) What would the Machem bunker occupants have restored, and for whom?!

Technical data on air-filters and related plant was classified information ... exact knowledge of contents would lead to strategically important knowledge of what gases were expected. The STASI had a 'map falsification' department (but of course our own OS maps never told the whole truth either!) There is a 'bicycle' driven style emergency generator. ... just to ensure air circulation, not to generate electricity? and 12 hrs air reserves held in cylinders (druckluft) Battery reserves were prioritised for working the signals equipment.

Of 85 staff there were five women for cooking / cleaning! Flush toilets were to be used unless the bunker was sealed, in which case then chemical toilets were provided. There was provision for the storage of waste or corpses. Badly contaminated or irradiated personnel were to be pushed outside and abandoned. Diesel oil was stored sufficient for 35 days. Korbeltz is a later / improved design STASI bunker, but at Machem we were able to see all the equipment in-situ. Bunker access steps are of uneven riser heights!

### **Colditz WWII PoW camp**

Colditz is a small town (railway station now abandoned, rail links now provided by buses) about 36 km south-east of Leipzig. The castle (a ruin in 1430 - 70, rebuilt) is within the town, and was used as a lunatic asylum before and after WWII. The castle was an internment camp 1933 - 35, and a PoW camp for escapee officers 1939 - 45, famous amongst the British as a result of numerous published account of PoW

escapes, but barely known amongst the Germans. The hospital moved out in 1996 and most of the 400 rooms are now empty, but some contain museum displays and some are to be converted to a restaurant. Red volcanic stone is prominent in the fabric. The building is now looking for a viable economic future. Public guided tours are provided.

We were shown various mostly unsuccessful escape tunnels dug by the French and others, and a museum of escape equipment. At the liberation in 1945 the Americans and the Russians occupied the two halves of the town, west and east of the river. As a result of the Potsdam Conference, the American / Russian border was moved further to the west, so Colditz subsequently fell entirely within the Russian zone and the DDR.

During WWII, M19, (which was responsible for assisting PoW escapes) discovered detailed plans of the Castle in the British Museum, copies of which were smuggled in to the inmates to assist them!

### **Blankenburg Bundeswehr underground storage bunker -**

Blankenburg is a town on the northern edge of the Harz mountains about 15 km south-west of Halberstadt. There is a small active Bundeswehr establishment here, with a standard gauge rail link, currently in use to store medical supplies - anything from safety-pins to X-ray machines (equipment such as the latter is also checked / maintained here.)

There is a small surface barracks / administration area. A s.g. railway line serves the site, with a transfer shed just outside the tunnel entrance. The very large tunnel, which goes right through the hill between the two huge access doors, has s.g. track laid in it, with a platform

alongside inside the hill. The 100 tonne doors take three minutes to open or close ... one was demonstrated for us.

The tunnels are first on record in 1944. PoW labour was sent here, and scientific instruments (manometers and thermometers) were manufactured, surface factories having been bombed. The Waffen SS subsequently took over and the site was then linked with DORA, although V-weapons were not manufactured here. In 1945 the Americans, then the British, occupied the area, but it fell into the Russian zone after the Potsdam Conference, and then the DDR.

During 1947 - 75 the tunnels were used for local commercial storage. The NVA took the site over about 1975, and in 1980 it was reopened, much extended (four times the original area of tunnels?) The tunnels are all on one level, and worked into a sandstone ridge. This area is quite close to the old east / west German border. In 1990-91 the Bundeswehr took the site over for its current purpose.

Currently there are 10 - 15 military personnel, and somewhat more civilians (about 115) working at the site, essentially engaged in warehouse management and servicing technical equipment / maintaining optimum storage conditions for medicines and the like. There are distinct areas for medicaments, equipment and furniture, servicing, and dangerous items (compressed gases in cylinders.)

The entire bunker is of tunnels of large diameter, all on one level ... there is no 'lower' bunker, and there have never been any 'rockets' stored here ... nor is the 'Amber Room' hidden here! Likewise there is no Erich Honecker room, and there is no

secret railway tunnel connecting to Halberstadt! A single Russian rocket did get jammed in the entrance tunnel once, to general embarrassment ... it was concluded rockets wouldn't conveniently negotiate the bend in the entrance tunnel / fit into this storage facility, and the single rocket was ultimately removed!

There are 20,000 m<sup>2</sup> of floor area, of which 15,500 m<sup>2</sup> are available for storage. 2,600 tonnes of stores. The tunnels are in shotcreted sandstone and are c. 6 - 8 m wide and high. NVA location numbers on the walls are still used. Diesel trucks can be used underground as the ventilation system is very efficient. There are six or eight equipment repair shops.

The blast doors are too expensive to remove! Dormitories / canteen areas are not now used. If sealed, the bunker could survive with air for two weeks. There is an internal well. The three-tier bunks are no longer allowed to be used by Bundeswehr regulations, as drunk soldiers might fall from the top bunks and injure themselves and claim compensation!

There is a 'history room' (the former NVA control room) with contemporary DDR / NVA maps etc ... this facility is a popular 'day out' for visitors from the local area about 50 tours are organised each year. The Bundeswehr maintains this facility to provide employment in the town ... unemployment in eastern Germany is very high, up to 30% or more. We were shown around by the Commander, who is a pharmacy graduate.

There is CCTV surveillance of the entrance doors (for safety when closing!) periodic loudspeaker announcements make the entire bunker sound rather like a railway station!

Our route southwards from here was a pretty road through the Harz mountains, the first bit of real scenery all week! We ran alongside one of the narrow gauge railways for some kilometres. We made a lunch stop at a roadside café, .. lots of sorts of sausages and chips, but nothing edible. The beer was OK!

### **Nordhausen concentration camp DORA and underground rocket factory -Friday 4th May**

Nordhausen is a town on the southern side of the Harz mountains, and is served currently by both standard gauge DB railway lines and by a narrow gauge line which runs up into the mountains.

The Mittelwerke / DORA concentration camp and underground rocket factory is outside the town, about 6 km to the north by west of Nordhausen itself, in the area between Woffleben and Niedersachswerfen. Before 1936 there were old and unprofitable gypsum mining operations in the Kohnstein (a small mountain.) Tunnelling in the mountain was commenced, with two parallel tunnels A and B, initially for storage of strategic fuel reserves and chemical weapons. The two main tunnels penetrated right through from the southern side of the hill (where the



public access site is) to the northern side (where there is no access, and where

gypsum extraction continues ? above the tunnels.) Standard gauge rail lines ran along both northern and southern sides of the hill, and each of the two tunnels was wide enough to accommodate two parallel standard gauge tracks (which tracks were in fact laid in from both north and south.)

At first, concentration camp inmates from Buchenwald were used as slave labour to drive the main or inter-connecting tunnels, and initially they lived and slept and died in these tunnels as they were driven. Later the prisoners built their own exterior concentration camp, of which little now survives beyond an old cinema and crematorium building, and a small watch-tower, although a large area (about a quarter of the entire camp) remains clear as a memorial.

During the latter part of WWII the prisoners were forced to manufacture V1 and V2 rockets, and decaying piles of rocket fragments including propellant tanks, nose cones, and gyroscopes are recognisable. Even the side-tunnels connecting A and B are of impressive dimensions. The original southern entrances to A and B have been deliberately blocked by dynamiting, but a new access tunnel is now in use for visitors. Even the small part of the originally far more extensive tunnel network is on an impressive scale. Parts of the main and side tunnels further north are either blocked off by roof falls, or partially flooded, and as they run below the gypsum company's land they are 'off-limits.' They are said not to contain anything of additional interest anyway.

There is an excellent sales stall in the former cinema, where books are on sale and harrowing videos can be viewed of the condition of the camp and some of its few surviving inmates as found on liberation. By that time, many of the remaining inmates had been removed on a forced march. As the town of Nordhausen was largely destroyed in WWII by bombing, most of the wooden camp buildings were

removed for materials for repairing the town buildings.

I was narrowly missed by a V2 rocket in December 1944! We were followed around by assorted German radio and television teams over several days, and interviewed for broadcast. One TV crew was far too pushy ... they had been told they were welcome provided they did not get in the way of our visits!

### **Suhl STASI bunker**

Suhl is a town in a forested valley in the Harz mountains, about 18 km south-west of Ilmenau, but the district STASI bunker is in the mountains to its east, near a still-operating railway station near Rennsteig.

The STASI bunker for the Suhl district is now within hotel grounds, and public guided tours can be arranged. The bunker (built 1973 - 76) has the external appearance of, and was perhaps disguised as, an ordinary covered water reservoir. The interior is fully equipped or re-equipped. Usually only maintenance staff were present ... it would only have been fully staffed in times of crisis. Usual NBC I decontamination arrangements were seen at the entrance, including an airlock, and numerous compressed air cylinders (? to maintain internal overpressure.) . . . Steel canister toilets (entirely internal) would have been used in times of crisis ... and waste and corpses stored until external disposal was possible. This was previously a 'genuine' STASI holiday home! The holiday home image was maintained, within an established game park, and personnel wore hunting gear as 'cover.' . . . Curious glass manometers were noted on the bunker walls - these were to check that internal air pressure differences were maintained at required values either side of hermetically sealed internal doors. The site area is about 40,000 m<sup>2</sup> . . . The equipment is not now run, but is still operable. There was a large room for conferences / training, with maps on the walls. Suhl, Merkers, and

Nordhausen are all quite close to the old internal German border.

Canisters of chemicals for the yellow submarine air conditioner units were noted (one was taken by one of our chemists, with permission, for chemical analysis) - wording on the chemical canisters in Russian was to protect from fuel and water.)

There is an external sewage plant (which would not have been used in war.) Full staff would have been about 130. Fresh air was drawn in via an emergency exit ... the top was designed to look like a street light! Flexible silver-coloured tubes were to be used to connect compressed air cylinders to the internal ventilation systems if / when needed. Air pressure balancing (cf. manometers) was necessary for operation of airlocks / maintaining internal overpressure. Electricity was (normally) drawn from the DDR National Grid ... but there were no meters!

A 'bicycle' was to be used only to assist air circulation ... not to generate electricity. The bunker was upgraded in 1987. Dormitory / kitchen areas were never used. Maintenance staff ate / slept in the surface buildings. The bunker was always kept ready for immediate operational use ... there were two internal emergency power supplies (Diesel generators) ... exhausts from which were to be used to warm air intakes ... We were shown a waste storage / mortuary room ... wood shavings would have been used in the internal toilet canisters.. Food stocks kept underground were rotated so fresh (canned) supplies were always available in the bunker. A separate area (outside the controlled area) was reserved for technical staff and could be sealed off .. separate accommodation for 43 technical staff / kitchen / toilets emergency escape (to what!?) The current hotel owners took over an existing lease and would like to purchase the entire site.

## **Merkers Kali und Steinsalzindustrie Merkers**

Merkers is about 8 km west of Bad Salzungen. This is essentially a large mine most importantly working 'potash' (potassium chloride,  $KCl$ ) an important intermediary in the manufacture of potassium-based agricultural fertilisers. A subsidiary product, in economic terms, is rock-salt (largely used ? for de-icing roads.) If the UK mine at Boulby is a reliable guide, most of the mine access roadways are in the mechanically stronger rock-salt (sodium chloride,  $NaCl$ ) beds ... the cavities mined out in the economically more important  $KCl$  being mechanically weaker and abandoned to close up after being worked out.)

This mining field has been in use for about 100 years ... there are various large / (? once) interlinked mine complexes ... ? including connections below the former East / West German internal border

Merkers (or at least nearby mines) continues to mine potash (and perhaps some less valuable rock-salt for de-icing roads?), but is now largely a 'show mine' doing a considerable business in tourism. As salt mine public tours go, this one has much to recommend it! The more famous Wieliczka (Poland) wins hands-down on impressive subterranean mine timbering (and on carved rock-salt chapels, silly gnomes, and silly stories!), and nearby Bochnia is in many respects much better (more genuine mining, fewer gnomes and silly stories!) Merkers offers the punters what seem like high-speed switchback jeep rides up and down tunnel inclines, round corners, etc ... all very exhilarating. We were told we would cover 20 km underground (and I can believe it) and reach depths down to 800 m below surface. This was once 'the world's largest potash mine'

Points of call during the tour include:



The gold room ... during the 3<sup>rd</sup> Reich German patents were stored here ... and as the Nazi regime fell, looted gold (230 tonnes), bank notes en masse, and looted art treasures from cathedrals and museums etc were stored here ... some also went to Berchtesgarden. The Americans detected truck movements and investigated ... they arrived in this area 4 April 1945, and investigated the mine w.e.f. 6 April and discovered the 'gold room' and its contents. The contents were trucked to Frankfurt / Main and sent onwards to USA ... the whole lot weighed c. 400 tonnes ... the art treasures were worth more than the gold! Art treasures have been returned to the cathedrals and museums whence they had been looted, but the fate of the gold / banknotes we were told is classified information until 2015! Maybe the gold is still in the USA? The Americans had expected to find wartime munitions factories in the mine!

As at Colditz, this area was liberated by America but, as a result of the Potsdam agreements, assigned to Russian control ... after the gold etc had been removed! We were shown the 'largest underground machine in the world' in a vast cavern evidently concerned with collecting potash via holes in the ceiling from potash mine galleries above?

There are 4,600 km of mine tunnels ... 3,000 men worked at Merkus in DDR times Mines were worked to ownership boundaries ... interlinking was prohibited as if one mine flooded, and water penetrated others, all mines would have been lost (as in fact happened at and around Northwich in Cheshire.) Red / yellow / blue carnallite was worked for potash ... 80% KC1 / 20% NaCl

Workers from Buchenwald manufacturing aeroplane parts were mentioned. There is an excellent salt / potash-mining museum gallery with much equipment on show (underground.) A 'sanatorium' was once operated here, underground. At one point

basalt intrusions can be seen ... some good detailed geological sections are displayed in the museum gallery

The lowest point in the mine is at 1,100 metres below surface ... where the air temperature is c. 40°C ... the lowest point on the public tour is 800 m underground (temperature 28°C) ... there is a bar (alcohol-free beer!) ... and a grotto containing impressive salt (NaCl) crystals up to 1 m across ... this had been found in 1980, and has been open to the public since 1990 ... these are claimed to be the largest salt crystals in the world ... The beer is not OK!

Paul W, Sowen 21/6/2001



## BBC OTTERINGHAM

BBC OTTERINGHAM (TA276241) was built during the war to provide a high powered medium wave and long wave service (including propaganda) to Europe. Until then, the BBC had been using their existing transmitter sites at Bookman's Park, Droitwich and Daventry but this could only ever be a temporary solution while they developed a new east coast site. This consisted of a 94 acre plot with seven buildings and several 500 foot transmitter masts. Tests at the site started on 22nd January 1943 and the station finally came on line on 12th February 1943 six months late after two of the 500 foot masts collapsed during construction in August 1942. This late opening had disappointed BBC engineers as they were competing for completion with Aspidistra at Crowborough, which was under construction at the same time. Although used by the BBC, Aspidistra wasn't owned by the Corporation being owned and used by the government to broadcast black propaganda. The station, which was known as OSE5 had a maximum power of 800 kilowatts either on long wave or medium wave and at the time this was the most powerful transmitter in the world. 4 200 kilowatt Marconi transmitters were installed in 4 heavily protected surface buildings, possibly with earth revetments. These were driven and fed with programmes from a 5th building while the transmitter outputs were combined in a 6th building. The final building on the site was a standby set house with 3 X 740bhp diesel alternator sets.

The station was designed to broadcast with 200, 400, 600 or 800 kilowatts with up to four separate programmes simultaneously. The fourth transmitter was used to relay the Home Service (Radio 4) to the East Riding and North Lincolnshire. BBC Otteringham continued in service until well after the war but was eventually closed on 15th February 1953 because neither channels nor funds were available

for it continue in service. The transmitters were moved to Droitwich after where they provided service well into the 1970s, for Radio1 and Radio4 on medium wave and Radio 2 on long wave. They were installed in three storey buildings; the water cooling plant was below ground, the modulation and rectifier enclosures were on the ground floor, and the AF and RF stages were housed on a first floor gallery. The site of the aerial masts has now been returned to farmland while the transmitter site has been cleared of all buildings. A new industrial unit has been built at one end of the fenced site while the rest is a storage yard and lorry park.

Although the site appeared completely cleared of anything to do with the BBC, one section of the basement of one of the buildings remains intact. Just inside the front door of the new industrial unit there is a locked door opening onto a flight of steps down into the former basement. At the bottom of the steps there are three large rooms, one leading into another. Two smaller rooms are accessed from the first room with a key cabinet on the wall of one of them. At the far end of the third room is another small room, which includes a 'kick out' section of brick wall allowing emergency access into the middle room. Some of the bricks have been knocked out and the word 'Emergency' is still visible above the wall. There is also a door in the long side wall of the third room, this opens onto a short corridor with a gas tight door at the end opening on to a vertical shaft up to the building above. This has now been sealed at ceiling level. It is unclear if this was an emergency exit or served another purpose. There is ventilation trunking high on the wall of each room. It is unclear what the building or its basement were used for but, looking at old maps, it was the largest building on the site.

*Nick Catford*

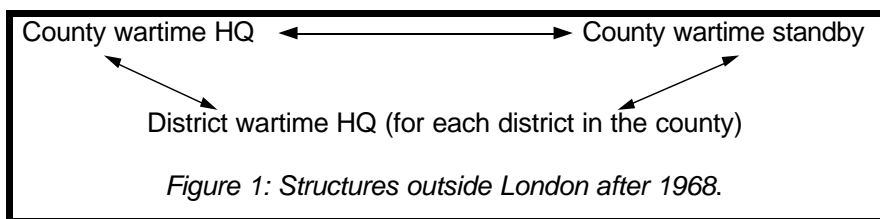
## Finding your local site

Looking through Siren you'll see that there are lots of sites out there – many in surprisingly 'normal' places. You're probably wondering how we knew these bunkers existed and whether there's one near you. In this article I will show you how to find your local one and add to our pool of knowledge on the subject. I am going to focus on sites built by local authorities but similar techniques can be used to find other sites.

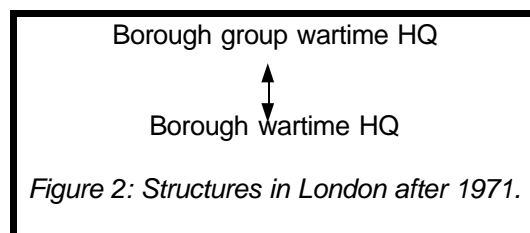
### What are you looking for?

What was built in your area naturally depends on the structure of local government there. Until the end of the cold war every local authority will have had at least one place designated for dealing with war and civil emergencies. This site may have been a bunker or a blockhouse, a protected basement in a town hall or other municipal building, it may not have been hardened and it may not have even been built! Nevertheless the authority was supposed to have had one and there will be records of it somewhere.

The first thing you need to do is work out which local authorities were responsible for the area you are looking at. Outside London these will be bodies such as district councils / metropolitan city councils and county councils / metropolitan authorities. Each of these will have had a site you may be interested in (*see figure 1*).



London was seen to be too large to have a county HQ and as such was split into 5 groups of boroughs: north, north east, north west, south east and south west (*see figure 2*). There were no standbys in London.



Before 1965 London was made up of more, smaller boroughs. For example the current London Borough of Southwark was formed in 1965 from the Metropolitan Boroughs of Bermondsey, Camberwell and Southwark. Each of these metropolitan boroughs will have had a civil defence control centre.

The names of these sites varied over time. Up to the disbanding of the civil defence corps in 1968 they were known as Controls. In the 1970s they were generally known as Wartime HQs and in the 1980s as Emergency Centres. They were generally (but not always) the same building.

## **Find that site!**

Now you know (roughly) what you are looking for I'll give you some pointers on how to find it.

The first place to look is on the RSG web site which lists all the sites we know about. The second is Duncan Campbell's book *War Plan UK*. However neither of these are complete and many authorities will have had more than one site or will have changed site at some point. This means that even though a local site is listed there may well be others in that area that are not. There may be other information on known sites, such as site plans, which no one has unearthed yet.

To find this sort of information you need to look in your local authority's archive and local studies collection. You will be able to find out where this is from your council's web site, a branch of your local library or from a directory such as the one published by the Public Records Office. Don't forget about your county council archive or the London Metropolitan Archives.

When you get to your archive you need to know where to look. In the Second World War civil defence will have come under the Civil Defence Committee or the ARP (Air Raid Precautions) Committee. Some post war sites started out as WWII controls. Up until 1968 your council should have still had a Civil Defence Committee but from 1968 things become more difficult. The committee that dealt with civil defence varied from borough to borough, it may well have changed several times and the papers may not have been transferred to the archive yet.

For post 1968 I would try the following:

- Indexes of local press cuttings (try under nuclear bunker, CND, emergency planning etc)
- Indexes of press releases
- Searching by the street you suspect it is on
- Locally produced pamphlets by peace groups.
- The archive's map/plan room
- Photograph collections

Most archives keep copies of all the large-scale Ordnance Survey sheets produced in the post war years. These will probably show the site – although this is not much good if you are looking for a protected basement as it will just show the building.

If all else fails try asking around. The borough archivist, local history society or emergency planning officer may be good places to start.

## **Bunker Hunting**

I hope this article has encouraged you to all go bunker hunting. Many of the sites we all know were found by someone ploughing through the local archives – it's generally good fun but can be time consuming. Good luck and let us know what you find!

## **References and further reading**

Mortimer, I. (1999), *Record Repositories in Great Britain*, 11<sup>th</sup> ed., Public Record Office.  
Campbell, D. (1982), *War Plan UK*.

*Caroline Ford*